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09:05:30 2 SUPERIOR COURT OF THE STATE OF CALIFORNIA  
09:05:30  
09:05:30 3 FOR THE COUNTY OF SAN DIEGO  
09:05:30  
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09:05:30 5 - - - - -  
09:05:30 )  
09:05:30 6 Coordination Proceeding ) JCCP No. 4042  
09:05:30 Special Title (Rule 1550 (b)) )  
09:05:30 7 ) DEPOSITION OF  
09:05:30 In re TOBACCO CASES II )  
09:05:30 8 ) RAPHAEL WITORSCH  
09:05:30 This document relates to: )  
09:05:30 9 )  
09:05:30 The People of the State of )  
09:05:30 10 California, et al. v. Philip )  
09:05:30 Morris, Incorporated, et al., )  
09:05:30 11 Los Angeles Superior Court )  
09:05:30 Case No. BC 194217; )  
09:05:30 12 )  
09:05:30 The People of the State of )  
09:05:30 13 California, et al. v. General )  
09:05:30 Cigar Co., et al., San Francisco )  
09:05:30 14 Superior Court Case No. 996780; )  
09:05:30 )  
09:05:30 15 The People of the State of )  
09:05:30 California, et al. v. Brown & )  
09:05:30 16 Williamson, et al., San Francisco )  
09:05:30 Superior Court Case No. 996781; )  
09:05:30 17 )  
09:05:30 The People of the State of )  
09:05:30 18 California, et al. v. Tobacco )  
09:05:30 Exporters, et al., San Francisco )  
09:05:30 19 Superior Court Case No. 301631 )  
09:05:30 - - - - - )  
09:05:30 20  
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09:05:30 21  
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09:05:30 22 TAKEN ON: Monday, July 24, 2000  
09:05:30  
09:05:30 23 TAKEN AT: 550 West C Street, Suite 1440  
09:05:30 San Diego, California 92101  
09:05:30 24  
09:05:30 REPORTED BY: Margaret A. Smith  
09:05:30 25 CSR No. 9733  
09:05:30 26  
09:05:30 27  
09:05:30 28

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 09:05:30 21 AJL VIDEO TAPING SERVICES  
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 09:05:30 1 I N D E X  
 09:05:30  
 09:05:30 2 WITNESS EXAMINED BY PAGE  
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 09:05:30 10 Manufacturers' Association, Industry  
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09:05:30 1		San Diego, California; Monday, July 24, 2000; 9:06 a.m.	
09:05:30 2			
09:05:30 3		VIDEOGRAPHER: This is the videotaped	
09:05:41 4		deposition of Raphael Witorsch in the matter of the State	
09:05:46 5		of California, City of San Jose, in re Tobacco Cases II,	
09:05:52 6		in San Diego County Superior Court, Case No. JCCP 4042,	
09:06:02 7		held in the offices of Vail, Christians and Associates,	
09:06:06 8		550 West C Street, Suite 1440, in San Diego, California.	
09:06:10 9		Today is July 24th, 2000. The time is	
09:06:15 10		9:06 a.m.	
09:06:17 11		I'm Michael Gold with AJL Video Taping	
09:06:20 12		Services, 1990 Grand Avenue, Suite 2C, in San Diego, and	
09:06:27 13		I'm the videotape operator.	
09:06:29 14		The certified shorthand reporter is Maggie	
09:06:32 15		Smith with Vail, Christians.	
09:06:33 16		Video and audio recording will be taking	
09:06:37 17		place at all times during this deposition unless counsel	
09:06:41 18		has specifically requested to go off the record.	
09:06:44 19		Counsel, would you please introduce	
09:06:47 20		yourselves for the record.	
09:06:48 21		MR. HULBURT: Chris Hulburt for the	
09:06:50 22		plaintiff.	
09:06:50 23		MR. STONE: Gregory -- go ahead.	
09:06:51 24		MR. LENDRUM: Jeff Lendrum on behalf of	
09:06:54 25		Liggett Group.	
09:06:55 26		MR. STONE: Gregory Stone on behalf of Philip	
09:06:56 27		Morris, Incorporated.	
09:06:58 28		MR. ELY: Clausen Ely with Covington &	
		Vail, Christians & Associates (619)544-8344	4
09:07:00 1		Burling on behalf of Philip Morris; Lorillard; Brown &	
09:07:05 2		Williamson; and Reynolds.	
09:07:07 3		MR. HOLTMANN: John Holtmann for Philip	
09:07:11 4		Morris.	
09:07:11 5		VIDEOGRAPHER: The court reporter can now	
09:07:12 6		swear the witness.	
09:07:12 7			
09:07:12 8		RAPHAEL WITORSCH,	

09:07:12 9 BEING FIRST DULY SWORN, TESTIFIED AS FOLLOWS:  
09:07:25 10  
09:07:25 11 EXAMINATION  
09:07:25 12 BY MR. HULBURT:  
09:07:25 13 Q Sir, would you please give us your full name  
09:07:28 14 and spell it for the record.  
09:07:28 15 A Raphael J. Witorsch, R-a-p-h-a-e-l,  
09:07:38 16 W-i-t-o-r-s-c-h.  
09:07:40 17 Q Have you given deposition testimony before in  
09:07:44 18 any other cases?  
09:07:46 19 A I gave a deposition testimony approximately  
09:07:51 20 15 years ago on a case pertaining to breast implants.  
09:07:58 21 Q Is that the only time you've testified in  
09:08:00 22 deposition?  
09:08:00 23 A To my recollection, yes.  
09:08:01 24 Q All right. Let me repeat some things you're  
09:08:04 25 probably already familiar with or maybe discussed with the  
09:08:08 26 defendants' attorneys, but just to make sure we're on the  
09:08:11 27 same page here, as we get started.  
09:08:12 28 As I -- as I indicated before we got started,  
Vail, Christians & Associates (619)544-8344 5  
09:08:15 1 my name is Chris Hulburt. I'm an attorney representing  
09:08:18 2 the plaintiffs in this lawsuit.  
09:08:19 3 You understand, of course, that this is a  
09:08:21 4 proceeding taking place within the context of this lawsuit  
09:08:23 5 involving secondhand smoke which is pending here in  
09:08:27 6 San Diego? Yes?  
09:08:28 7 A Yes.  
09:08:28 8 Q All right. And the oath the court reporter  
09:08:32 9 administered to you is the same oath you would take if you  
09:08:34 10 were testifying in a courtroom with a judge and a jury and  
09:08:37 11 all the formalities that go with that.  
09:08:39 12 You understand that?  
09:08:39 13 A Yes.  
09:08:39 14 Q It has the same potential penalties of  
09:08:42 15 perjury if for some reason your testimony is proven to be  
09:08:45 16 false.  
09:08:46 17 You understand that?  
09:08:46 18 A Yes.  
09:08:46 19 Q And for that reason, it's important that your  
09:08:48 20 testimony be as accurate as possible so we don't create  
09:08:52 21 any unintentional confusion or controversy or  
09:08:55 22 inconsistencies in your testimony. And one way to ensure  
09:08:58 23 that is to make sure that you always fully understand the  
09:09:00 24 question before you answer.  
09:09:01 25 So I want to encourage you, invite you, and  
09:09:05 26 ask you to let me know at any time if you don't fully  
09:09:09 27 understand my question. If you do that, I'll do my best  
09:09:12 28 to rephrase it or ask it again to help you understand  
Vail, Christians & Associates (619)544-8344 6  
09:09:14 1 before you answer.  
09:09:15 2 All right?  
09:09:15 3 A All right.  
09:09:16 4 Q If you answer the question, then I'm  
09:09:17 5 constantly assuming that you fully understood it.  
09:09:20 6 Otherwise, you never would have answered.  
09:09:22 7 You understand that?  
09:09:22 8 A I understand that.  
09:09:24 9 Q Okay. Is there anything you're aware of  
09:09:26 10 today that you think might affect your ability to give  
09:09:28 11 your best and most accurate testimony this morning?  
09:09:30 12 A Not that I can think of.  
09:09:31 13 Q Sometimes fatigue, illness, medication, or

09:09:34 14 something might be affecting somebody.  
09:09:36 15 Are you aware of anything like that that  
09:09:38 16 might be affecting your testimony today?  
09:09:39 17 A Minor jet lag, but I think I'm okay with that.  
09:09:43 18 Q All right. Now, you have been designated by  
09:09:47 19 the tobacco manufacturer defendants in this case as one of  
09:09:52 20 their expert witnesses.  
09:09:53 21 You understand that?  
09:09:54 22 A Yes.  
09:09:54 23 Q And what is your understanding of what you've  
09:09:58 24 been asked to do?  
09:10:01 25 A I've been asked to evaluate the relationship  
09:10:07 26 between ETS and three endpoint areas, one of which is  
09:10:17 27 respiratory illness in children. One is ETS exposure  
09:10:22 28 during pregnancy, and intrauterine growth retardation.  
Vail, Christians & Associates (619)544-8344 7  
09:10:29 1 And the third is ETS and SIDS, sudden infant death  
09:10:40 2 syndrome.  
09:10:41 3 Q All right. Are there any other areas besides  
09:10:52 4 what you just described that you understand you have been  
09:10:54 5 asked to deal with in this case?  
09:10:56 6 A Not in terms of testimony. In the past, I  
09:10:59 7 was asked to evaluate areas of the literature. So I have  
09:11:04 8 had experience with other endpoints as well, and in --  
09:11:12 9 prior to me being declared as an expert witness, I was a  
09:11:17 10 consultant where I was looking at some of the depositions  
09:11:20 11 of some of the people on the plaintiffs' side and giving  
09:11:25 12 my evaluations of that too. So I'm familiar with other  
09:11:30 13 areas, but I've confined my expertise because of human  
09:11:37 14 limitations to these three areas. I didn't want to spread  
09:11:39 15 myself so thin that I'd be a jack of all trades and a  
09:11:43 16 master of none.  
09:11:44 17 Q Are you expecting to testify in response to  
09:11:47 18 any of the plaintiffs' experts' testimony on issues other  
09:11:50 19 than the three that you've given me?  
09:11:53 20 A They may be related to what I'm dealing with.  
09:11:57 21 Q Like what? What do you mean by that?  
09:12:00 22 A Well, since I'm -- since I'm discussing  
09:12:03 23 respiratory illness in children as an endpoint, there were  
09:12:09 24 several people who testified on animal experiments  
09:12:12 25 regarding the effect of exposure of rats, for example, or  
09:12:18 26 guinea pigs to machine-generated ETS. And as it's  
09:12:24 27 relevant to what I'm saying, I could conceivably answer a  
09:12:29 28 question in that area.  
Vail, Christians & Associates (619)544-8344 8  
09:12:30 1 Some people have testified -- given testimony  
09:12:34 2 on levels of nicotine contaminants in the body fluids of  
09:12:42 3 offspring in animal experiments, and I have some  
09:12:46 4 familiarity with that.  
09:12:47 5 So I probably will make some response as  
09:12:52 6 appropriate, if it has relevance to what I'm dealing  
09:12:56 7 with. And if I can get this in, I'll be in good shape.  
09:13:04 8 MR. STONE: Undo the clip for a minute.  
09:13:06 9 THE WITNESS: All right.  
09:13:07 10 MR. STONE: Take the clip off and hand it to  
09:13:09 11 me.  
09:13:10 12 THE WITNESS: All right.  
09:13:10 13 MR. STONE: Thanks.  
09:13:11 14 BY MR. HULBURT:  
09:13:11 15 Q I want to -- I want to try to be as specific  
09:13:20 16 as possible to understand the boundaries of your expected  
09:13:23 17 testimony. You gave me some.  
09:13:25 18 The thought that some people talked about

09:13:27 19 animal experiments and how that may or may not relate to  
09:13:30 20 respiratory illnesses in children. I think I understand  
09:13:33 21 that.

09:13:33 22 Can you give me any other specific instances  
09:13:36 23 where you think you will be responding to any of the  
09:13:38 24 plaintiffs' experts' testimony on areas other than the  
09:13:43 25 three areas that you've identified as your areas of  
09:13:45 26 expertise in this case?

09:13:47 27 A I can't think of it right now.

09:13:49 28 Q How much time have you spent on this case?  
Vail, Christians & Associates (619)544-8344 9

09:13:57 1 A I've not tallied up the time, but a good deal  
09:14:00 2 of time. Several months.

09:14:01 3 Q Give me your best estimate of the number of  
09:14:03 4 hours or days or weeks.

09:14:06 5 A It's been -- I'd say a couple of hundred,  
09:14:14 6 ballpark.

09:14:15 7 Q A couple hundred hours?

09:14:17 8 A Yes. Through the months.

09:14:19 9 Q Okay. So is that somewhere between 2- and  
09:14:23 10 300 hours? Is that your thought?

09:14:25 11 A I really haven't tallied it up. So it would  
09:14:30 12 not be what I would consider an accurate testimony, but 2-  
09:14:33 13 and 300 hours. Closer to 200, I would say.

09:14:37 14 Q And for that time, you charge 400 dollars an  
09:14:45 15 hour?

09:14:46 16 A Yes.

09:14:47 17 Q Let me get a little bit of your background.  
09:15:03 18 I know from your -- the designation of you that you are  
09:15:14 19 a -- that you are a professor in the Department of  
09:15:16 20 Physiology at the Medical College of Virginia; is that  
09:15:19 21 correct?

09:15:19 22 A That's correct.

09:15:20 23 Q What is your -- what's your business address  
09:15:22 24 there?

09:15:22 25 A Department of Physiology, Box 980551, Medical  
09:15:33 26 College of Virginia. Virginia Commonwealth University,  
09:15:39 27 Richmond, Virginia, 23298-0551.

09:15:47 28 Q Okay. And the declaration says you've got a  
Vail, Christians & Associates (619)544-8344 10

09:15:49 1 bachelor's of arts in biology from NYU --

09:15:52 2 A Yes.

09:15:53 3 Q -- in 1963. Master of science in physiology  
09:15:56 4 from Yale in '65, and Ph.D. in physiology from Yale in  
09:16:01 5 '68.

09:16:02 6 Is that accurate?

09:16:02 7 A That's correct.

09:16:03 8 Q Do you have any other formal education  
09:16:04 9 besides that?

09:16:05 10 A I spent two years as a post doctoral fellow  
09:16:08 11 in endocrinology at the University of Virginia from 1968  
09:16:13 12 to 1970, and I've joined the faculty at Virginia  
09:16:18 13 Commonwealth University Medical College in 1970 as an  
09:16:23 14 assistant professor. And I rose through the academic  
09:16:28 15 ranks to professor, in 1988.

09:16:30 16 Q All right. Have you been on the faculty of  
09:16:32 17 any other educational institutions besides that one?

09:16:37 18 A No.

09:16:37 19 Q Are you -- I'll use the word "affiliated"  
09:16:45 20 with any private entities so that you have some sort of  
09:16:48 21 business involvement other than through Virginia  
09:16:52 22 Commonwealth?

09:16:53 23 A Well, I usually -- I do some of my consulting

09:17:01 24 work on a subcontracting basis, with an organization in  
09:17:06 25 Washington.

09:17:07 26 Q Okay. What is that organization?  
09:17:08 27 A That's the Center for Environmental Health  
09:17:11 28 and --

Vail, Christians & Associates (619)544-8344 11

09:17:11 1 Q So what's -- I'm sorry.  
09:17:13 2 A I'm sorry. CEHHT. Center for Environmental  
09:17:17 3 Health and Human Toxicology.  
09:17:19 4 Q And what is your relationship to CEHHT?  
09:17:22 5 A They're a group. They are a private  
09:17:24 6 consulting group that has a wide variety of clients, and  
09:17:29 7 when there is need for a consultant in certain areas, they  
09:17:35 8 ask of my services. And they bill the client directly,  
09:17:40 9 and I bill them for my time. So that's the only  
09:17:43 10 arrangement in terms of I'm not a principal or anything  
09:17:47 11 like that. I'm a free agent.  
09:17:49 12 Q How long have you been affiliated with CEHHT?  
09:17:53 13 A I've been affiliated with them for most of  
09:17:56 14 my -- all of my consulting career, since around 1984.  
09:18:01 15 Q Do you do all of your consulting through  
09:18:08 16 CEHHT?  
09:18:08 17 A A large part of it, but not all of it.  
09:18:10 18 Q What percentage?  
09:18:12 19 A Oh, 80-plus percent I think I do through  
09:18:15 20 them, I would say.  
09:18:16 21 Q All right. And the remainder of your  
09:18:18 22 consulting is through what?  
09:18:19 23 A Colleagues, contacts.  
09:18:22 24 Q Independent?  
09:18:23 25 A Independent. Right.  
09:18:23 26 Q CEHHT is run by whom?  
09:18:32 27 A Well, the principal of CEHHT is Philip  
09:18:36 28 Witorsch. That's my brother. And through the years, we  
Vail, Christians & Associates (619)544-8344 12

09:18:41 1 have worked together on numerous projects.  
09:18:44 2 Q Can you describe for me what the purpose or  
09:19:03 3 mission or business of CEHHT is?  
09:19:06 4 A Well, I can't give you an authoritative  
09:19:10 5 opinion, because I don't know much about the business  
09:19:13 6 operation, but my impression is that it is very much like  
09:19:17 7 other consulting organizations that are -- conduct  
09:19:25 8 business with clients and do biologically, toxicologically  
09:19:31 9 related work on their behalf.  
09:19:33 10 Q And so for what clients have you done work  
09:19:40 11 through CEHHT?  
09:19:41 12 A I'd have to sort of think back and recall,  
09:19:44 13 but my very first assignment was on red dye No. 3, and the  
09:19:52 14 Tri-Valley food processing, as I recall. The National  
09:19:56 15 Food Processing Association. Red dye No. 3 was the dye  
09:20:00 16 that was in maraschino cherries.  
09:20:04 17 I've worked with them on trichloroethylene  
09:20:09 18 and its toxicity, polychlorobiphenyls, dioxin. I'm sure  
09:20:19 19 there are others, but that's all that comes to mind right  
09:20:22 20 now.  
09:20:22 21 Q And, typically, is CEHHT working on behalf  
09:20:27 22 of the manufacturer or the industry that's involved in  
09:20:32 23 this chemical or this product that may or may not have  
09:20:35 24 harmful effects?  
09:20:37 25 A I couldn't really comment because I don't  
09:20:39 26 know much of the extent of their business. I do know that  
09:20:42 27 I believe they do some government-related work. I think  
09:20:45 28 in the dioxin cases, as a matter of fact, the client was

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09:20:50 1 the federal government.

09:20:53 2 My involvement is really way down the road.

09:20:57 3 I offer my scientific analysis and expertise. I put in

09:21:03 4 the -- I get the assignment. I put in the time, and I

09:21:06 5 bill for my hours.

09:21:07 6 Q So you explained this before, that CEHHT

09:21:14 7 might get hired by some client. It will then send an

09:21:17 8 assignment to you as a consultant. You bill it to CEHHT.

09:21:22 9 A That's right.

09:21:22 10 Q They bill it to the client?

09:21:24 11 A Yes. I don't interface with the clients.

09:21:27 12 They'll contact me, and I will say, well, appropriately,

09:21:34 13 you contact CEHHT and ask them what they want, and then

09:21:38 14 deal with me. I have enough on my plate with my academic

09:21:42 15 responsibilities, and with other consulting work that may

09:21:47 16 come my way, I really don't have the time or the

09:21:50 17 inclination, per se, to do marketing.

09:21:54 18 Q So do you have some sort of contract with

09:21:58 19 them that says if somebody contacts you, you need to run

09:22:01 20 it through CEHHT?

09:22:02 21 A No. It's an honorable -- it's an honorable

09:22:05 22 thing. It happens to be my brother, but I'd do it with

09:22:08 23 anybody. It's sort of like taking away a potential client.

09:22:12 24 Q All right. And does CEHHT pay you 400

09:22:15 25 dollars an hour for your work?

09:22:17 26 A No. They actually bill out at 400 dollars an

09:22:20 27 hour, and they -- they usually pay me -- well, it depends

09:22:24 28 on the price. I get paid 200 dollars an hour for my

Vail, Christians & Associates (619)544-8344 14

09:22:28 1 services.

09:22:29 2 Q Is your work in this case through CEHHT?

09:22:41 3 A Yes. I don't do any independent work on a

09:22:50 4 tobacco-related issue.

09:22:52 5 Q So, by that, you mean that any work that

09:22:56 6 you've been involved in, in your career, related to

09:23:00 7 tobacco issues has been through CEHHT?

09:23:03 8 A That's right.

09:23:04 9 Q To your knowledge, has CEHHT had any tobacco

09:23:13 10 issue clients other than the tobacco industry?

09:23:17 11 A To my knowledge, no. And I think I can say

09:23:22 12 with some degree of authority that they've done no other

09:23:26 13 work but environmental tobacco smoke. They haven't dealt

09:23:33 14 with active smoking.

09:23:34 15 THE REPORTER: I didn't hear the last

09:23:34 16 sentence.

09:23:34 17 THE WITNESS: They have not worked with

09:23:35 18 anything other than environmental tobacco smoke. They

09:23:39 19 don't work with active smoking.

09:23:41 20 BY MR. HULBURT:

09:23:41 21 Q Have you done any tobacco work other than

09:23:48 22 environmental tobacco smoke?

09:23:50 23 A No.

09:23:50 24 Q So all your ETS work has been through CEHHT?

09:23:57 25 A That's correct.

09:23:58 26 Q And all your tobacco work has been ETS?

09:24:00 27 A Absolutely.

09:24:01 28 Q And all of that work has been in some way on

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09:24:04 1 behalf of the industry?

09:24:06 2 A At their request. On behalf of the industry.

09:24:10 3 Q The client has always been --

09:24:11 4 A The client has been the one that's requested



09:24:14 5 my services.

09:24:15 6 Q Right.

09:24:15 7 The client has always been the tobacco

09:24:17 8 industry --

09:24:17 9 A That's right.

09:24:18 10 Q -- in some way?

09:24:20 11 A Yes.

09:24:21 12 Q When did you first start consulting on the

09:24:26 13 subject of environmental tobacco smoke?

09:24:28 14 A To the best of my recollection, it was in the

09:24:32 15 mid to late eighties. I would say around 1986. At the

09:24:40 16 time that the National Academy of Science report was being

09:24:43 17 drafted, there was also a -- an analysis. There was a

09:24:48 18 case involving ETS contamination in commercial flights,

09:24:57 19 commercial airlines. So I was consigned to look at the

09:25:04 20 literature, and based on the literature at the time, offer

09:25:09 21 my opinion. And it was relatively early on in the field.

09:25:16 22 Q How did it come about that you -- that you

09:25:24 23 got involved?

09:25:24 24 A Well, I had been doing other types of

09:25:29 25 consulting work with my brother. The first one being the

09:25:35 26 red dye 3, and I think I -- I know that they liked the

09:25:42 27 quality of the work that I did.

09:25:44 28 Q Who is "they"?

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09:25:46 1 A Well, I know the center, CEHHT, liked the

09:25:50 2 quality of the work that I did, and I think one thing

09:25:56 3 leads to the other. That assignment had been completed,

09:26:02 4 and there were other assignments in the interim, I

09:26:05 5 believe. I think prior to actually getting involved in

09:26:08 6 tobacco, I was looking at some of the

09:26:13 7 trichloroethylene-related issues, and I was looking at

09:26:16 8 some of the dioxin-related issues, in much the same way.

09:26:22 9 Looking at the evidence and me trying to evaluate what the

09:26:27 10 evidence meant. Interpret the evidence.

09:26:35 11 Q So when you first got involved in doing any

09:26:38 12 ETS work, did somebody on behalf of the tobacco industry

09:26:42 13 contact you?

09:26:42 14 A No.

09:26:43 15 Q They contacted your brother, Philip?

09:26:45 16 A Well, I don't know exactly how that

09:26:47 17 transpired, per se. But they had some -- somebody --

09:26:54 18 there was some interaction. To the best of my

09:26:58 19 understanding, they had met an attorney at Covington &

09:27:03 20 Burling who was engaged in the case. And that was sort of

09:27:06 21 the way it -- it was -- that relationship was established.

09:27:11 22 Q Through -- through tobacco and your brother?

09:27:13 23 A That's right.

09:27:13 24 Q And then how did you first get involved?

09:27:16 25 What was the --

09:27:16 26 A I was asked -- I was asked by my brother,

09:27:21 27 he'd say -- I don't remember the specifics. But he called

09:27:23 28 me up, asked me whether I'd be interested in getting

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09:27:26 1 involved in this issue, would I look at some of the

09:27:29 2 science and see what I thought about the science. And

09:27:34 3 they sent down documents related to it, epidemiologic

09:27:41 4 studies, and I gave my opinion. And that's how it sort of

09:27:46 5 developed.

09:27:46 6 Q Okay. At some point in there, did you have

09:27:49 7 meetings with Covington & Burling?

09:27:51 8 A Through the years -- I don't think we had

09:27:55 9 specific meetings with Covington & Burling. But I met

09:27:58 10 with Covington & Burling attorneys in Washington. Perhaps  
09:28:03 11 they may have been at Covington & Burling offices, in  
09:28:06 12 retrospect.

09:28:07 13 Q I don't care which office. But lawyers --  
09:28:09 14 A Yes. Through the years, I met the lawyers.  
09:28:11 15 Right.

09:28:12 16 Q Are there any other consultants for CEHHT  
09:28:17 17 that do work on ETS besides you?

09:28:19 18 A I believe there are, and I think most of  
09:28:22 19 these people do it the same way I do it. They are  
09:28:24 20 subcontracted. They are free agents. I don't  
09:28:33 21 specifically know what the exact financial arrangement or  
09:28:35 22 the billing arrangement is. But when I came on, there  
09:28:38 23 were other people who were actively engaged in the -- on  
09:28:41 24 the issue, other academics.

09:28:45 25 Q Can you give me names of other individuals  
09:28:47 26 who you understand to be consultants through CEHHT --  
09:28:50 27 A It's been a long time.  
09:28:51 28 Q -- on ETS?

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09:28:53 1 A Some of them I am friendly with, though I  
09:28:56 2 might not be involved. Two that come to mind that are not  
09:28:59 3 actively involved right now, I still have ongoing social  
09:29:02 4 relationships with. One is Mark Reasor, who is a  
09:29:05 5 professor of pharmacology at West Virginia University, and  
09:29:11 6 he's a toxicologist, a bona fide toxicologist in inhalant  
09:29:19 7 toxicology. I exchange e-mails with him on a weekly  
09:29:23 8 basis. We talk on the phone. We just have a good  
09:29:26 9 relationship.

09:29:26 10 And another colleague that I happen to have  
09:29:30 11 developed a very enjoyable relationship with is Dr. Ron  
09:29:38 12 Hood who worked with me on one of our early manuscripts.  
09:29:43 13 He is a professor of biology at the University of Alabama  
09:29:49 14 in Tuscaloosa, and a very well-regarded fetotoxicologist  
09:30:00 15 in birth defects. Those two come to mind.

09:30:07 16 Q Can you think of any others?  
09:30:13 17 A I'm sure I will as the day proceeds. But  
09:30:16 18 right now, I'm having a senior moment.

09:30:19 19 Q Since first being contacted then in 1986 to  
09:30:31 20 get involved in the subject of ETS, can you tell me what  
09:30:36 21 issues you've been asked to address through your work  
09:30:39 22 through CEHHT on behalf of the tobacco industry?

09:30:42 23 A Yes. I've --

09:30:43 24 MR. STONE: Dr. Witorsch, before you answer  
09:30:45 25 the question, I just want to remind you that there may be  
09:30:48 26 certain of your projects that are confidential for one  
09:30:52 27 reason or another, and you should not disclose any of the  
09:30:55 28 projects you've worked on where there are issues of

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09:30:57 1 confidentiality. And if we need to, we can step outside  
09:30:59 2 and clarify that. Otherwise, ones that are of public  
09:31:02 3 knowledge or that you understand not to be confidential in  
09:31:04 4 any way, you should certainly provide to Mr. Hulburt.

09:31:10 5 THE WITNESS: I thought, just to be clear,  
09:31:12 6 you were really dealing with what types of scientific  
09:31:15 7 problems I dealt with as opposed to projects.

09:31:17 8 BY MR. HULBURT:

09:31:17 9 Q I'm interested in the issue. Right.  
09:31:19 10 A Yes.  
09:31:19 11 Q Not right now, necessarily, the form of the  
09:31:23 12 project, but what issues you've been asked to deal with.  
09:31:25 13 A Very rarely, to be very frank, I don't know  
09:31:28 14 much about the politics of the form of the issue. All I

09:31:32 15 know about is the science. I've looked at primarily  
09:31:36 16 respiratory illness in children. In fact, I think I've  
09:31:42 17 done much of my involvement in.

09:31:46 18 I've also worked with my brother, who is a  
09:31:49 19 pulmonologist, a board certified pulmonologist on  
09:31:54 20 respiratory health effects in adults. I've had minimal --  
09:32:03 21 well, relatively less involvement in ETS effects in lung  
09:32:08 22 cancer. I've looked at the literature, and through the  
09:32:11 23 years, I've been asked to evaluate some of those issues.

09:32:15 24 I've had a rather extensive involvement in  
09:32:22 25 the ETS and intrauterine growth retardation issue. To be  
09:32:27 26 more specific, I was involved in the earlier Cal EPA  
09:32:33 27 Prop 65 work. In dates back to the late eighties as  
09:32:37 28 well. I remember having -- making several trips to  
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09:32:41 1 California back in the late eighties and to Sacramento and  
09:32:45 2 making presentations. So I would say I had quite a bit  
09:32:50 3 involvement in that, that issue.

09:32:52 4 So it would be adult respiratory, childhood  
09:33:00 5 respiratory, IUGR, lung cancer. From time to time, I'm  
09:33:08 6 asked to evaluate the quality of a paper related to  
09:33:11 7 cardiovascular effects. Various and sundry endpoints, but  
09:33:16 8 they have been more intermittent. I really can't comment  
09:33:21 9 with authority on the totality of those literatures.  
09:33:24 10 However, with regard to, let's say, the ones I have here,  
09:33:29 11 that I indicated, I have quite an extensive knowledge in  
09:33:34 12 those areas.

09:33:34 13 Q Am I correct in understanding that you've not  
09:33:41 14 done any scientific experiments yourself on issues related  
09:33:47 15 to ETS, but that the bulk of your work has really been the  
09:33:52 16 review of others' papers?

09:33:54 17 A I was thinking. No, I have not done any  
09:33:57 18 laboratory experiments related to environmental tobacco  
09:34:00 19 smoke.

09:34:01 20 Q Am I correct in understanding that your work  
09:34:03 21 on the subject of ETS has always been reviewing the papers  
09:34:08 22 written by others?

09:34:09 23 A That's correct.

09:34:10 24 Q And reviewing them to -- for critique?

09:34:15 25 A Critiquing them scientifically, yes.

09:34:18 26 Q All right. And then sometimes that results  
09:34:20 27 in your writing a paper yourself, reviewing, critiquing  
09:34:26 28 various publications. Sometimes that results in your  
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09:34:29 1 writing a report for a governmental agency or for some  
09:34:32 2 other source?

09:34:33 3 A That's correct.

09:34:34 4 Q Okay. In your work in non-ETS areas, do you  
09:34:41 5 do science yourself?

09:34:43 6 A Yes.

09:34:43 7 Q Do you --

09:34:44 8 A Yes, I do.

09:34:45 9 Q In what areas do you perform your own science?

09:34:48 10 A Yes. I've been an active academic through my  
09:34:52 11 career. In fact, I think it's fairly safe to say at most  
09:34:58 12 medical schools, one does not rise to the rank of full  
09:35:01 13 professor without having done scholarly research of some  
09:35:06 14 fashion. So I've been in the laboratory since my days as  
09:35:13 15 a graduate student. I've always managed to have a  
09:35:17 16 research program.

09:35:17 17 My overall training has been in the area of  
09:35:21 18 endocrinology, hormone-related effects. And I've spent a  
09:35:26 19 good deal of my career working on the phenomenon of

09:35:31 20 steroid genesis, which is the origination that make  
09:35:35 21 steroid hormones, such as the gonads, the adrenal cortex.  
09:35:41 22 In fact, I spent most of my career on that area, the  
09:35:47 23 adrenal cortex.

09:35:49 24 A large part of my academic career has been  
09:35:52 25 devoted to a hormone called prolactin, which is a  
09:36:00 26 pituitary gland hormone which is usually associated with  
09:36:04 27 controlling milk production. But we're learning now that  
09:36:08 28 it is really a very ubiquitous hormone in that it has

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09:36:12 1 effects in various parts of the body. And as a result of  
09:36:14 2 that, it's moved me into a whole bunch of areas.

09:36:18 3 I've been very active in the prostate  
09:36:22 4 research. I've been active in breast research. In more  
09:36:25 5 recent years, I've done some work in immunology research  
09:36:29 6 because prolactin is an immunological hormone as well.

09:36:33 7 And I think my work -- and just to sort of  
09:36:36 8 sum up. My work in toxicology, the consulting work, has  
09:36:43 9 sparked real interest in toxic mechanisms. What is the  
09:36:50 10 biology behind a toxic response. How does a cell respond  
09:36:54 11 to a toxic insult. And in more recent years, I've been  
09:36:59 12 looking at cell insults, cell death, and how it's evoked  
09:37:07 13 and how it's prevented. So it's still sort of  
09:37:10 14 endocrinology, but it's more of a toxicologic  
09:37:14 15 endocrinology.

09:37:15 16 And I've evolved as well into a  
09:37:16 17 toxicologist. I'm now a member of the Toxicologist  
09:37:19 18 Society as well as I have my endocrine credentials.

09:37:23 19 So I've been active in the laboratory for  
09:37:27 20 30-some odd years.

09:37:32 21 Q When did you become a member of the  
09:37:34 22 Toxicology Society?

09:37:35 23 A Oh, three, four years ago, I believe.

09:37:38 24 Q And what was necessary for that, for you to  
09:37:43 25 get that membership?

09:37:44 26 A That society requires an application,  
09:37:50 27 presentation of a C.V., two letters of recommendation from  
09:37:56 28 members, and evidence that you have done research in --

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09:38:03 1 published research in areas of toxicology -- that are  
09:38:06 2 relevant to toxicology. It's a -- it's a large field.  
09:38:10 3 And I believe my work on cell death, in particular, was  
09:38:15 4 one of the areas that was instrumental in me getting  
09:38:20 5 elected into that -- into that society.

09:38:23 6 Q Who gave you the letters of recommendation?

09:38:25 7 A There were two colleagues: Joseph  
09:38:28 8 Borzelleca, who is a professor of emeritus at the Medical  
09:38:32 9 College of Virginia. And John Thomas, who is -- they're  
09:38:36 10 older than I am. John Thomas is retired as vice-president  
09:38:43 11 of academic services at the University of Texas in San  
09:38:47 12 Antonio. He was a professor of pharmacology as well.

09:38:54 13 Q All right. Can you give me a breakdown of  
09:38:56 14 your professional time. How much time spent teaching, how  
09:38:59 15 much in the lab, how much research, how much consulting.

09:39:02 16 A Well, unless there is a tremendous demand on  
09:39:07 17 my time, getting into consulting, I try to limit my  
09:39:13 18 activities to about 50 hours a month to consulting. And I  
09:39:17 19 do this to make sure that I do not impinge upon my  
09:39:21 20 academic responsibilities.

09:39:23 21 We are permitted, technically, one day a week  
09:39:27 22 to devote to consulting services, at the university.  
09:39:31 23 That's eight hours a day.

09:39:32 24 What I usually do is maybe I'll use that

09:39:35 25 academic day to work or I will work at nights and on  
09:39:39 26 weekends. So that's how I fill in my 50 hours a week.  
09:39:42 27 And then I would say in terms of the other  
09:39:44 28 responsibilities, which would be the 40 hours or so a week  
Vail, Christians & Associates (619)544-8344 24  
09:39:48 1 that I -- that I spend in my academic work, I'd say  
09:40:00 2 planning my lectures, counseling graduate students. I'm  
09:40:05 3 just trying to think of the -- it varies from week to  
09:40:08 4 week. I'd say 25 hours or so -- well, 20 or so hours  
09:40:14 5 related to teaching activities. 15 or so hours related to  
09:40:21 6 the laboratory activities.  
09:40:24 7 At the present time, as most senior  
09:40:26 8 researchers, I don't get into the lab that much, doing wet  
09:40:31 9 science, unless there's an emergency, to fix something,  
09:40:36 10 because I have students that I train. And they do the  
09:40:39 11 experiments. But I interacted with them on a regular  
09:40:41 12 basis, look at their data, counsel them. And then I would  
09:40:46 13 say five hours a week is related to various and sundry  
09:40:51 14 administrative responsibilities.  
09:40:53 15 I sit on committees, the institution. I'm on  
09:40:58 16 the Dental School Admissions Committee, which has taken  
09:41:01 17 several hours a week of time.  
09:41:03 18 So that's sort of the proportions.  
09:41:07 19 Q What percentage of your consulting work now  
09:41:10 20 is related to tobacco-related issues?  
09:41:13 21 A At the current time?  
09:41:13 22 Q Yeah. Let's say for the past two or three  
09:41:16 23 years. If it makes a difference, past five years.  
09:41:19 24 A Okay. I think 70 percent is a good ballpark  
09:41:21 25 figure. As I indicated, I do not market. I don't have  
09:41:26 26 the time to market. So I will take whatever comes my way,  
09:41:37 27 provided I feel I can give a fair and honest judgment of  
09:41:41 28 the issue. And it's really whatever activity has -- I've  
Vail, Christians & Associates (619)544-8344 25  
09:41:48 1 been requested to do. But I have worked in recent years  
09:41:51 2 on the silicone implant issue. I've done some work on --  
09:42:04 3 I'm trying to think of how to say it specifically. Birth  
09:42:11 4 defects and drugs in utero, testosterone, androgenic drugs  
09:42:20 5 and their effects on offspring.  
09:42:22 6 And the other thing I've done more recently,  
09:42:25 7 which has been sort of an independent project, because  
09:42:27 8 I've been very interested in it, is I've just completed a  
09:42:31 9 review on endocrine disrupters. That's environmental  
09:42:37 10 estrogens. That's because it was so closely related to  
09:42:40 11 my endocrine field, and it's such an important  
09:42:43 12 toxicological field, I really wanted to get up to speed in  
09:42:46 13 that area. So I thought that was the best way of doing  
09:42:49 14 it.  
09:42:49 15 Q How much money per year do you make  
09:42:54 16 consulting on tobacco-related issues?  
09:42:57 17 A It varies. It could be from 70- to 100,000  
09:43:01 18 dollars a year.  
09:43:03 19 Q For how long has that been true?  
09:43:09 20 A The last three or four years, I guess. There  
09:43:11 21 have been years that have been 30,000-dollar years. But I  
09:43:15 22 think 70- to 100- is probably a reasonable estimate over  
09:43:21 23 the last few years.  
09:43:23 24 Q Can you give me some -- your best estimate of  
09:43:25 25 how much money you've received consulting on tobacco  
09:43:29 26 issues for the industry since you first started in 1986?  
09:43:33 27 A I -- I really couldn't conceive. I haven't  
09:43:40 28 thought about it.  
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09:43:40 1 Q Well, if you think about it now, can you give  
09:43:45 2 me your best estimate?

09:43:48 3 A I -- I'm afraid if I gave you an estimate,  
09:43:54 4 I'd be more, or less. I would say several hundred  
09:43:59 5 thousand dollars is a --

09:44:02 6 Q Well, you indicated that it's approximately  
09:44:04 7 70- to 100,000 dollars a year for the past three to four  
09:44:08 8 years.

09:44:08 9 A Okay.

09:44:09 10 Q Before that, was it more, or less?

09:44:11 11 A Probably less, because the -- I would -- on  
09:44:17 12 retrospect, I think our hourly rate was less. And I had  
09:44:21 13 other projects, and I wasn't doing it as -- I don't know,  
09:44:25 14 as regularly -- on a regular basis as I have been doing in  
09:44:30 15 recent years.

09:44:30 16 There have been times, to be very frank, that  
09:44:34 17 I have not been asked to do any tobacco work for months,  
09:44:38 18 six months at a time.

09:44:39 19 Q Is that the -- is that the longest stretch of  
09:44:43 20 time --

09:44:43 21 A It's hard to say.

09:44:45 22 Q -- since '86 that you think you've gone  
09:44:48 23 without being --

09:44:48 24 A No. I think it may be even longer. I think  
09:44:52 25 in 1993, I edited a book in toxicology. I spent virtually  
09:44:58 26 all of my time in that year, and I don't believe I did  
09:45:02 27 much in the way of any types of consulting.

09:45:05 28 Q Do you share in any of the income of CEHHT,  
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09:45:32 1 income or profits?

09:45:33 2 A No.

09:45:58 3 Q In any of your published work -- and by  
09:46:02 4 "published," I don't necessarily mean just in journals.  
09:46:05 5 It might be something related to some agency where a  
09:46:09 6 report has been submitted by you or comments.

09:46:12 7 In any of your published work, have you ever  
09:46:14 8 taken a position on an ETS issue that you understood to be  
09:46:19 9 contrary to the industry's position?

09:46:21 10 MR. STONE: Objection; vague and ambiguous,  
09:46:24 11 lacks foundation for this witness to have knowledge of  
09:46:26 12 what you describe as the industry's position, assumes  
09:46:29 13 facts not in evidence; namely, there is such a position.

09:46:32 14 You can answer the question as best you know,  
09:46:35 15 Dr. Witorsch.

09:46:36 16 THE WITNESS: Well, I do not -- I feel it's  
09:46:39 17 perhaps safe to say that the industry is -- did not agree  
09:46:48 18 with, in essence, our opinion that much of the ETS-related  
09:46:53 19 effects are -- can be explained on the basis of active  
09:46:59 20 smoking, a misclassification, for example. I've been  
09:47:05 21 making statements regarding active smoking as a -- to --  
09:47:10 22 as a mechanistic explanation for the last 10 or 12 years  
09:47:15 23 in certain areas.

09:47:18 24 So before I can speculate that the tobacco  
09:47:19 25 industry doesn't care for people making statements that  
09:47:23 26 active smoking can be adverse to health, I've been holding  
09:47:27 27 that position for a long time.

09:47:34 28 BY MR. HULBURT:  
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09:47:34 1 Q I see.

09:47:35 2 So if the tobacco industry doesn't think that  
09:47:39 3 active smoking is a problem, you've taken a position that  
09:47:43 4 any health effects allegedly on ETS might be related to  
09:47:47 5 active smoking?

09:47:48 6 MR. STONE: Objection; misstates the  
09:47:50 7 witness's prior testimony. Argumentative.  
09:47:51 8 You can answer.  
09:47:52 9 BY MR. HULBURT:  
09:47:52 10 Q I'm trying to make sure I understood your  
09:47:54 11 answer.  
09:47:55 12 Have I captured the essence of what you were  
09:47:57 13 trying to say?  
09:47:57 14 A No. I hope -- I'm not sure you did.  
09:48:00 15 Basically, I've -- in explaining scientifically certain  
09:48:03 16 ETS-related associations, I've, from time to time,  
09:48:09 17 indicated that these explanations -- these relationships  
09:48:13 18 can be explained by an in utero effect, for example, the  
09:48:19 19 mother smoking during pregnancy as opposed to airborne  
09:48:23 20 smoke. So I've offered that explanation.  
09:48:25 21 I have never even bothered to ask what the  
09:48:28 22 tobacco industry has thought of my opinion. And I've  
09:48:31 23 never had any indication that what I said was not to their  
09:48:38 24 liking. Although, if one were to speculate, that, you  
09:48:43 25 know, perhaps they don't care for the implication of  
09:48:47 26 active smoking. But I've never really been told I  
09:48:49 27 couldn't do that. So I don't want to convey that  
09:48:52 28 impression.

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09:48:52 1 Q When you get an assignment related to ETS,  
09:48:59 2 which you know originates from some part of the tobacco  
09:49:03 3 industry, what is your understanding of your role on  
09:49:06 4 behalf of the industry?  
09:49:10 5 A Well, I don't really view myself as doing  
09:49:13 6 anything on behalf of the industry. Maybe that's my own  
09:49:16 7 feeling. I'm doing it as a consultant to give them my  
09:49:21 8 best take on the science.  
09:49:24 9 I feel what I have to do is look at the  
09:49:29 10 particular study in a objective, dispassionate fashion,  
09:49:37 11 and point out the strengths and the weaknesses of an  
09:49:40 12 individual study.  
09:49:41 13 When I'm asked to look at a body of  
09:49:44 14 literature or make a judgment, I'm asked to interpret the  
09:49:49 15 data, as I see it, in terms of the strength of the  
09:49:53 16 conclusions, and things like that.  
09:49:55 17 The reason I mention this is just to say  
09:49:58 18 that -- and very often I see these documents, Dr. Witorsch  
09:50:02 19 has made a statement on behalf of The Tobacco Institute,  
09:50:05 20 and I sort of bristle, because I regard myself as an  
09:50:08 21 independent-thinking individual who is asked to render an  
09:50:13 22 opinion, not an opinion the client may necessarily like.  
09:50:18 23 I'm not there to give them an opinion they may necessarily  
09:50:21 24 like.  
09:50:21 25 Q Well, when you review articles on an  
09:50:25 26 assignment that originated from the tobacco industry and  
09:50:27 27 you review articles that purport to find a relationship  
09:50:32 28 between ETS and some negative health endpoint, is it your  
Vail, Christians & Associates (619)544-8344 30  
09:50:37 1 understanding that you've been asked to figure out a way  
09:50:39 2 to critique that article, to challenge the conclusion?  
09:50:42 3 A No.  
09:50:44 4 Q Why not?  
09:50:45 5 MR. STONE: Objection; vague and ambiguous  
09:50:47 6 with respect to the phrase as to whether the question is  
09:50:52 7 why he thinks he hasn't been, or if you're asking him as  
09:50:55 8 to the state of mind of others. It also assumes facts not  
09:50:58 9 in evidence.  
09:50:58 10 You can answer.

09:51:00 11 THE WITNESS: If I understand it, the  
09:51:03 12 question you asked is am I asked to figure out a way to  
09:51:10 13 strengthen their argument or to make their position  
09:51:13 14 better. I don't view that at all.  
09:51:15 15 I think from Day One, of all the consulting  
09:51:18 16 work that I've ever been -- that I've ever been involved  
09:51:21 17 in -- in fact, when my brother first asked me to be a  
09:51:24 18 consultant, he said, you know, you are not and are never  
09:51:28 19 expected to be an advocate. You are supposed to look at  
09:51:31 20 the information in an objective, dispassionate way, and,  
09:51:36 21 you, sir, do not serve your client if you give them a  
09:51:39 22 sugar-coated view of what the situation is. You give them  
09:51:45 23 your view of the science, and that is your obligation.  
09:51:49 24 So I'm not there to soften the blow, if you  
09:51:53 25 will, of a particular paper or make them feel good. I'm  
09:51:56 26 here to look at the science. I would evaluate that  
09:51:59 27 science the way I would evaluate any science.  
09:52:01 28 BY MR. HULBURT:  
Vail, Christians & Associates (619)544-8344 31  
09:52:01 1 Q You testified in the Cal EPA hearings related  
09:52:05 2 to secondhand smoke?  
09:52:06 3 A Yes, I did.  
09:52:07 4 Q And submitted many written offerings in that  
09:52:14 5 project as well?  
09:52:15 6 A Yes.  
09:52:15 7 Q All right. And in that role, you were  
09:52:20 8 working there on behalf of The Tobacco Institute as the  
09:52:23 9 client; is that correct?  
09:52:23 10 A Well, I think that's what's stated. To be  
09:52:28 11 very frank, I never knew who was the actual client,  
09:52:31 12 because I was asked by the center to -- whether I would be  
09:52:38 13 interested in doing it. And then I interacted with  
09:52:41 14 attorneys. So I don't know specifically if it was The  
09:52:45 15 Tobacco Institute. I never thought about that.  
09:52:47 16 Q The attorneys were from Covington & Burling?  
09:52:50 17 A To the best of my recollection.  
09:52:51 18 Q Which you understand to be the attorneys that  
09:52:54 19 represent The Tobacco Institute?  
09:52:56 20 A I don't know. I really don't know.  
09:52:58 21 Q Who did you think their client was?  
09:53:00 22 A Well, I never thought of it. I knew that  
09:53:03 23 they had tobacco-related clients. Mr. Ely, when he  
09:53:06 24 announced himself, said I represent Covington & Burling on  
09:53:09 25 behalf of Philip Morris. So I really never thought about  
09:53:12 26 it. I knew that they were attorneys. I knew that their  
09:53:16 27 attorneys were tobacco industry, but I never really was  
09:53:21 28 interested in the -- in the politics or in the business  
Vail, Christians & Associates (619)544-8344 32  
09:53:25 1 arrangements between what arm of the tobacco -- tobacco  
09:53:30 2 industry.  
09:53:30 3 Q What attorneys from Covington & Burling did  
09:53:32 4 you deal with for the testimony at the Cal EPA?  
09:53:37 5 A I think Mr. Ely was the one that I dealt with  
09:53:39 6 primarily on that case.  
09:53:40 7 Q All right. And were you an advocate for the  
09:53:43 8 tobacco industry in your testimony in the Cal EPA?  
09:53:46 9 A Well, I don't view myself as an advocate, but  
09:53:49 10 I think one could interpret my position in an advocacy  
09:53:55 11 position, because I challenged the science and the  
09:54:00 12 conclusions of the Cal EPA.  
09:54:03 13 In my own mind, I never felt that I was doing  
09:54:07 14 it to have the tobacco lawyers, the tobacco industry like  
09:54:11 15 me. I did it because I felt scientifically this was a



09:54:15 16 weak document, based on not very strong scientific data,  
09:54:28 17 and that was my thinking at the time -- that is my  
09:54:31 18 thinking.  
09:54:31 19 Q Were any of your arguments to the Cal EPA  
09:54:37 20 accepted by them?  
09:54:38 21 A I think there were some minor points that, as  
09:54:43 22 I read in the commentary, that were conceded. I also  
09:54:50 23 believe that at the time, the California EPA did not  
09:54:57 24 support the position that environmental tobacco smoke was  
09:55:01 25 causally associated with intrauterine growth retardation.  
09:55:06 26 And I would like to think, based on the work that we had  
09:55:12 27 done, that we had really maybe convinced them that the  
09:55:15 28 data was not very compelling.  
Vail, Christians & Associates (619)544-8344 33  
09:55:17 1 Q Did the EPA -- the EPA rejected your opinions  
09:55:26 2 regarding the relationship between ETS and respiratory  
09:55:28 3 illnesses in children?  
09:55:30 4 A That's right.  
09:55:31 5 Q I'll try to ask a real short circuiting  
09:55:40 6 question now.  
09:55:41 7 Are your opinions in this case today on the  
09:55:44 8 subject of the relationship between ETS and respiratory  
09:55:47 9 illness in children any different now than they were in  
09:55:51 10 your Cal EPA testimony or written comments?  
09:55:56 11 MR. STONE: Objection; vague and ambiguous  
09:55:57 12 and overbroad.  
09:55:58 13 You can answer as best you can.  
09:56:00 14 THE WITNESS: Okay. With the exception of  
09:56:04 15 the fact that there's a lot more -- well, there is some  
09:56:08 16 more data, there are more papers under consideration, the  
09:56:12 17 bottom line is there is no change in my opinion on that  
09:56:17 18 particular issue.  
09:56:19 19 BY MR. HULBURT:  
09:56:19 20 Q Has there -- I'm really trying to get to the  
09:56:26 21 idea, is there anything new since that whole body of  
09:56:29 22 work? Is there anything new that you think was good  
09:56:32 23 science that suggests any connection between ETS and  
09:56:35 24 respiratory effects for children?  
09:56:37 25 MR. STONE: Same objections.  
09:56:41 26 THE WITNESS: I don't think there's anything  
09:56:42 27 new.  
09:56:43 28 BY MR. HULBURT:  
Vail, Christians & Associates (619)544-8344 34  
09:56:43 1 Q Is there anything new that suggests there's  
09:56:46 2 not a connection between ETS and respiratory effects for  
09:56:49 3 children?  
09:56:50 4 MR. STONE: Same objections.  
09:56:52 5 THE WITNESS: I can proceed with answering  
09:56:54 6 the question?  
09:56:55 7 MR. STONE: Yes.  
09:56:55 8 THE WITNESS: Okay. Well, it's interesting,  
09:56:57 9 because I had a chance to look at the Cal EPA document  
09:57:02 10 again, over the last few days, and I think in a major  
09:57:11 11 area, there's a reason -- there is a rational reason for  
09:57:14 12 why we disagree. And with all due respect, I think the  
09:57:19 13 Cal EPA has missed the boat.  
09:57:21 14 I think they are -- their judgment of  
09:57:27 15 parental smoking and respiratory health effects in  
09:57:30 16 children have come to the conclusion that there is a  
09:57:33 17 causative relationship, because they are not looking at  
09:57:37 18 the data correctly.  
09:57:38 19 BY MR. HULBURT:  
09:57:38 20 Q That was the position you took at the time,

09:57:45 21 right?

09:57:46 22 A Well, they -- they -- I didn't -- it didn't

09:57:53 23 hit me, as I recall, at the time, that that perspective

09:58:03 24 that I look at now was the basis of the disagreement. I

09:58:09 25 think I challenged some of their conclusions, and my

09:58:14 26 impression is they just chose to sort of ignore my

09:58:19 27 recommendations, among other individuals.

09:58:22 28 However, I think there's a fundamental flaw

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09:58:26 1 in the way the Cal EPA looks at the respiratory health

09:58:31 2 effects in children.

09:58:32 3 Q That is something new that you didn't argue

09:58:35 4 before?

09:58:35 5 A It's not -- I don't recall arguing it. I

09:58:39 6 made the argument, but I never said, hey, I'm looking at

09:58:43 7 it this way, you're looking at it another way. Yes, I

09:58:47 8 think as I look at it now, it's something that they --

09:58:52 9 they tended to not even address.

09:58:54 10 Q Tell me what the fundamental flaw is.

09:58:57 11 A Well, the fundamental difference is that we

09:59:04 12 address respiratory health -- I've looked at the totality

09:59:06 13 of the literature, at -- presently in excess of 250

09:59:12 14 papers. And based on publications going back to the

09:59:18 15 mid-eighties, there tends to be an age-related

09:59:22 16 relationship between parental smoking and respiratory

09:59:25 17 health effects in children.

09:59:27 18 When people have conducted what is called

09:59:29 19 longitudinal studies, following over time, they find that

09:59:34 20 as the child is very young, there's a statistical

09:59:37 21 relationship, and as the child gets older, the

09:59:40 22 relationship disappears.

09:59:41 23 On that basis, we have been looking at the

09:59:44 24 literature ever since we've started looking at it, as two

09:59:48 25 separate entities: the relationship between parental

09:59:52 26 smoking and respiratory health effects in preschool

09:59:55 27 children, five years and under; and the relationship of

10:00:00 28 respiratory health effects in school-aged children.

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10:00:03 1 And what we find is a consistent

10:00:07 2 statistically significant relationship in parental smoking

10:00:15 3 and respiratory health effects in young children and a

10:00:20 4 relationship in older children that does not show

10:00:25 5 consistency in terms of individual endpoints, like asthma,

10:00:30 6 like wheezing, like cough, like bronchitis. The

10:00:36 7 reproducibility of these relationships in older children

10:00:39 8 are not very reproducible.

10:00:46 9 And in science, the benchmark of a scientific

10:00:49 10 observation is its reproducibility.

10:00:51 11 So in older children, there is definitely no

10:00:55 12 consistency. I looked at the Cal EPA report the other

10:01:00 13 day. When they address an endpoint like asthma, they do a

10:01:05 14 so-called meta-analysis, which is a questionable as well,

10:01:11 15 they don't seem to make this age differentiation. They

10:01:15 16 group all ages of children together. As a result of that,

10:01:19 17 the preschool will show a significant association, and any

10:01:23 18 lack of association that is seen in older children is sort

10:01:28 19 of marked.

10:01:29 20 So I think that is a fundamental difference

10:01:31 21 with the way the Cal EPA has addressed the issue. I think

10:01:35 22 we are valid, justified on the basis of what is known to

10:01:41 23 look at preschool and older children the way we did.

10:01:44 24 And the other issue which I addressed, which

10:01:47 25 I think they have not satisfactorily answered is that in

10:01:53 26 preschool children, they have not -- they're assuming that  
10:01:56 27 parental smoking or more often it's maternal smoking is a  
10:02:04 28 surrogate for ETS.

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10:02:09 1 And I think there is a stronger case if you  
10:02:11 2 look at the literature and if you think about the  
10:02:14 3 pathways, the biological pathways involved, there's a  
10:02:18 4 stronger case for associating those effects with active  
10:02:24 5 smoking during pregnancy, an in utero effect. Not ETS  
10:02:31 6 exposure during pregnancy, but the woman who smokes while  
10:02:36 7 she's pregnant with a child. In all likelihood, more  
10:02:41 8 often than not, smokes after birth as well, postpartum.

10:02:45 9 Q So on this last point, that would be  
10:02:50 10 misclassification? You're talking about --

10:02:52 11 A No, that's not a misclassification. That's  
10:02:54 12 a -- because -- well --

10:02:56 13 Q You're talking about women who admitted that  
10:03:00 14 they smoked during pregnancy and smoked postpartum?

10:03:03 15 A No. Usually women -- usually women who  
10:03:06 16 declare themselves as postpartum smokers, okay, also smoke  
10:03:11 17 in utero. That's been validated time and time again. So  
10:03:16 18 if a woman is asked do you smoke now, she will say -- she  
10:03:21 19 might say yes. Well, you can bet that she smoked during  
10:03:25 20 pregnancy as well, because most of the analyses that have  
10:03:28 21 looked at that relationship see very little difference  
10:03:32 22 between prepartum and postpartum smoking.

10:03:35 23 We have actually looked at how many of the  
10:03:38 24 studies in preschool children have addressed the issue of  
10:03:44 25 smoking during pregnancy, and it's about 13 percent of the  
10:03:49 26 studies. If there are 90 studies, maybe 13 or 14 of  
10:03:53 27 those, if you asked the woman whether she smoked during  
10:03:55 28 pregnancy. So it's an issue that for all intents and

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10:04:00 1 purposes has not been addressed.

10:04:01 2 Q So you're -- I want to stay on this last  
10:04:05 3 point, just because it's fresher. Your thought is that  
10:04:08 4 these studies that suggest a health effect in children  
10:04:11 5 less than five from their mother smoking, primarily, is  
10:04:17 6 probably -- the health effect is probably caused by the  
10:04:20 7 mother smoking during pregnancy?

10:04:22 8 A It's a -- yes. It's a more rational  
10:04:29 9 explanation, more biologically plausible explanation than  
10:04:32 10 an ETS effect.

10:04:33 11 Q And your criticism of the study protocol is  
10:04:36 12 that they failed to ask whether the mother smoked during  
10:04:39 13 pregnancy, or that they asked and got a false answer?

10:04:44 14 A No. They -- well, I guess one could say they  
10:04:47 15 failed to -- it wasn't addressed.

10:04:49 16 Q What does that mean?

10:04:50 17 A Well, it wasn't asked. I mean, they asked  
10:04:52 18 the mother -- most of these studies, they asked the mother  
10:04:56 19 do you smoke, you know, and she may have a two-year-old or  
10:05:02 20 something. She said yes. And then they made the  
10:05:05 21 interpretation maternal smoking is causely related to  
10:05:11 22 asthma in off- -- in their children. And they interpreted  
10:05:15 23 that as an ETS-related phenomenon, when it could have just  
10:05:20 24 as well, if not more likely been due to an effect of her  
10:05:26 25 smoking during pregnancy.

10:05:28 26 Q So does maternal smoking cause any health  
10:05:30 27 effects whatsoever in preschool-aged children?

10:05:35 28 MR. STONE: Objection; outside the area in  
Vail, Christians & Associates (619)544-8344 39

10:05:37 1 which this witness has been designated to testify. He's

10:05:40 2 been limited, as he told you, to three areas.

10:05:43 3 You can answer the question as best you can.

10:05:47 4 THE WITNESS: I would say the data of -- the

10:05:49 5 endpoints that I know of the data are inconclusive. Not

10:05:56 6 maternal smoking, but ETS as a causative agent of a

10:06:02 7 health -- adverse health effect in children. To my mind,

10:06:07 8 the data are not compelling.

10:06:09 9 BY MR. HULBURT:

10:06:09 10 Q Is it more probable than not that ETS causes

10:06:13 11 adverse health effects in children?

10:06:16 12 MR. STONE: Objection; vague and ambiguous,

10:06:18 13 lacks foundation.

10:06:18 14 You can answer as best you can.

10:06:20 15 THE WITNESS: Could you restate that question.

10:06:22 16 BY MR. HULBURT:

10:06:22 17 Q Yeah.

10:06:24 18 Is it more probable than not that ETS causes

10:06:26 19 adverse health effects for children less than five years

10:06:31 20 old whose parents smoke?

10:06:33 21 MR. STONE: Same objections.

10:06:34 22 THE WITNESS: I can't -- I can't answer that

10:06:36 23 question. It's purely speculation.

10:06:38 24 BY MR. HULBURT:

10:06:38 25 Q Well, is it your opinion that it's more

10:06:42 26 probable than not that there is no connection between ETS

10:06:46 27 and health effects in children less than five?

10:06:49 28 MR. STONE: Same objections.

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10:06:51 1 THE WITNESS: I'm being asked to make a

10:06:53 2 probability judgment where I don't know the answer. All I

10:06:55 3 can say on that issue is that the interpret -- the data,

10:07:02 4 as presented, are inconclusive with regard to an ETS

10:07:06 5 effect.

10:07:07 6 BY MR. HULBURT:

10:07:07 7 Q So you don't know --

10:07:11 8 A I don't know.

10:07:12 9 Q -- one way or the other?

10:07:13 10 A Yes. I could give this additional bit of

10:07:27 11 information, so I don't want to leave you hanging, that

10:07:30 12 the amount of tobacco contaminant that is in the bodily

10:07:36 13 fluid of an ETS-exposed individual, it's elevated, you

10:07:41 14 know. There have been reports of cotinine levels being

10:07:46 15 elevated.

10:07:47 16 The amount that's elevated is really very

10:07:50 17 small relative to what an active smoker sees. It's -- in

10:07:57 18 terms of serum cotinine, I think the estimates would be

10:08:01 19 anywhere from one-tenth to one-hundredth what an active

10:08:04 20 smoker sees. It's more like the one-hundredth. And in

10:08:07 21 terms of the marker, which is implicated in a variety of

10:08:10 22 health effects, carboxyhemoglobin, many studies have not

10:08:15 23 been able to detect any effect of ETS exposure in a real

10:08:19 24 world situation with elevation of carboxyhemoglobin.

10:08:26 25 Q In your opinion, does ETS exposure cause

10:08:30 26 respiratory illness in anybody?

10:08:35 27 MR. STONE: Objection; outside the areas on

10:08:37 28 which this witness has been designated to testify, vague

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10:08:41 1 and ambiguous, and overbroad.

10:08:42 2 You may answer as best you can.

10:08:44 3 THE WITNESS: There is some evidence which

10:08:47 4 still has to be explored further, that asthmatic -- a

10:08:54 5 proportion of asthmatic adults acutely exposed to very

10:09:01 6 high levels of machine-generated ETS will exhibit

10:09:06 7 pulmonary responses. That's the work of the -- it's a  
10:09:10 8 group in New Orleans, Stankus and Lehrer. These studies  
10:09:15 9 have been in adults. And I don't remember the exact  
10:09:17 10 percentage, but it's somewhere in the neighborhood of  
10:09:19 11 about 20 percent or less of the asthmatics show this  
10:09:22 12 response.

10:09:22 13 It's also possible that that response is not  
10:09:25 14 evoked by anything in the ETS, but it may be a -- almost  
10:09:32 15 like a placebo -- maybe that's not the proper word. But  
10:09:37 16 sort of an artifact of the experimental design, the fact  
10:09:40 17 that the individual is in an enclosed chamber, it is  
10:09:47 18 experiencing the unpleasantness of the tobacco smoke, the  
10:09:51 19 eye irritation. And it has been shown, at least, or  
10:09:54 20 there's a good school of thought that suggests that  
10:09:59 21 asthmatic attacks exacerbation are also psychosomatically  
10:10:05 22 induced.

10:10:05 23 BY MR. HULBURT:

10:10:05 24 Q So you would not even in that study concede  
10:10:08 25 that there's a probable connection between the ETS and the  
10:10:11 26 asthma reaction?

10:10:11 27 A Well, I think --

10:10:12 28 MR. STONE: Objection; misstates the  
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10:10:15 1 witness's prior testimony, argumentative.

10:10:17 2 THE WITNESS: "Concession" is an  
10:10:18 3 inappropriate term.

10:10:18 4 BY MR. HULBURT:

10:10:18 5 Q Let's say agree, then.

10:10:20 6 A Then I would say I would be prudent and  
10:10:23 7 cautious. I would be prudent and cautious with the ETS  
10:10:26 8 science. I would be prudent and cautious with my other  
10:10:29 9 area of laboratory work. That's the way I look at the  
10:10:33 10 information. I think it's irresponsible for a scientist  
10:10:37 11 to jump to a conclusion without having to derive what they  
10:10:44 12 think is the most suitable explanation.

10:10:46 13 Q Is it more probable than not that it's the  
10:10:49 14 ETS exposure that causes the asthma reaction in the New  
10:10:52 15 Orleans studies?

10:10:53 16 MR. STONE: Objection; lacks foundation,  
10:10:55 17 outside this witness's area of designated testimony.

10:10:58 18 THE WITNESS: I can't answer that.

10:10:59 19 BY MR. HULBURT:

10:10:59 20 Q In your opinion, is there any health effects  
10:11:04 21 of ETS exposure to school-aged children?

10:11:09 22 MR. STONE: Objection; outside the areas in  
10:11:11 23 which this witness has been designated to testify, to some  
10:11:13 24 extent. Overbroad, lacks foundation.

10:11:17 25 THE WITNESS: To the best of my knowledge,  
10:11:20 26 there's no compelling evidence that there is a causal  
10:11:26 27 relationship between ETS exposure and health effects.

10:11:30 28 BY MR. HULBURT:

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10:11:30 1 Q Is it more probable than not that there is a  
10:11:33 2 connection between health effects in school-aged children  
10:11:37 3 and ETS exposure?

10:11:39 4 MR. STONE: Same objections. Also vague and  
10:11:40 5 ambiguous.

10:11:41 6 THE WITNESS: Well, if one were to assign eye  
10:11:47 7 irritation and nasal irritation and discomfort due to  
10:11:52 8 being around an unpleasant agent, then I would have to  
10:11:57 9 agree that would be a health effect, because that's been  
10:12:00 10 documented time and time again.

10:12:03 11 BY MR. HULBURT:

10:12:03 12 Q Anything other than that?

10:12:07 13 A No.

10:12:09 14 MR. STONE: Same objections.

10:12:11 15 BY MR. HULBURT:

10:12:11 16 Q Are there any respiratory illnesses that are

10:12:15 17 more probable than not related to ETS exposure for

10:12:18 18 school-aged children?

10:12:20 19 MR. STONE: Same objections.

10:12:21 20 THE WITNESS: Not based on my analysis, no.

10:12:23 21 BY MR. HULBURT:

10:12:33 22 Q In your discussion of the Cal EPA fundamental

10:12:45 23 flaw, you said that you've reviewed over 250 papers, and

10:12:52 24 has it been your finding that there is a reported

10:12:56 25 consistent relationship between ETS exposure and

10:12:59 26 respiratory health effects in preschool-aged children?

10:13:04 27 A Yes.

10:13:04 28 Q But you believe that reported health effect

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10:13:09 1 is not actually related to ETS?

10:13:11 2 A Well, as I stated in most of the writings

10:13:14 3 that I've done, I usually state while one cannot exclude

10:13:18 4 the possibility that it's ETS, it might be ETS. In my

10:13:24 5 opinion, there are alternate explanations that are more

10:13:28 6 biologically plausible.

10:13:30 7 Q Is it probably ETS?

10:13:32 8 MR. STONE: Objection; vague and ambiguous,

10:13:34 9 lacks foundation.

10:13:34 10 THE WITNESS: I can't answer that.

10:13:35 11 BY MR. HULBURT:

10:13:35 12 Q You don't know?

10:13:36 13 A I don't know. I would guess it's not.

10:13:38 14 But that's sort of an unscientific type of

10:13:49 15 guess, an intuitive -- an intuitive sense.

10:13:53 16 MR. HULBURT: Let's take a quick break.

10:14:05 17 MR. STONE: Sure.

10:14:06 18 VIDEOGRAPHER: We are off the record at

10:14:09 19 10:14 a.m.

10:14:10 20 (Recess.)

10:19:30 21 VIDEOGRAPHER: We're back on the record at

10:27:10 22 10:27 a.m.

10:27:13 23 BY MR. HULBURT:

10:27:13 24 Q Dr. Witorsch, when were you first retained in

10:27:18 25 this case?

10:27:19 26 A My recollection is sometime in October is

10:27:23 27 when I was asked to get involved.

10:27:25 28 Q October of '99?

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10:27:27 1 A '99, yes.

10:27:28 2 Q Who contacted you then?

10:27:32 3 A I'm not quite sure. I think it was either

10:27:39 4 Clausen Ely or perhaps my brother contacted me that

10:27:47 5 Clausen had contacted him. I don't recall specifically.

10:27:51 6 Q All right.

10:27:52 7 A Probably the latter.

10:27:54 8 Q Probably Philip?

10:27:56 9 A Philip, yes.

10:27:57 10 Q Did you have some early contact then with

10:28:00 11 Mr. Ely to discuss the assignment, whether he was the

10:28:02 12 first contact or not? Did you have some early contact

10:28:05 13 with him to discuss your role in this case?

10:28:08 14 A Well, shortly after the initial contact, we

10:28:11 15 had some contact. I think it may have been over a

10:28:16 16 telephone conversation of what the issues were involved.

10:28:18 17 Q All right. And what was it that he asked you  
10:28:21 18 to do?  
10:28:21 19 A He asked me to look at the -- well, first, he  
10:28:31 20 described to some extent what the case was all about, the  
10:28:35 21 issue being regarding the health effects of ETS, primarily  
10:28:42 22 dealing with effects related to children, areas that I had  
10:28:46 23 been familiar with.  
10:28:50 24 And I don't recall whether he was -- he asked  
10:28:52 25 me to be a witness at the time or he indicated potentially  
10:28:56 26 I might be a witness. But would I work with him on the  
10:29:01 27 case. That's what I recall. Initially, to evaluate  
10:29:06 28 scientifically some of the testimony of some of the other  
Vail, Christians & Associates (619)544-8344 46  
10:29:12 1 witnesses, plaintiffs' witnesses.  
10:29:17 2 Q What work have you done in your case in order  
10:29:27 3 to get yourself to the point of where we're doing your  
10:29:32 4 deposition here today?  
10:29:34 5 A Well, initially, I did work that is not  
10:29:36 6 within this realm of responsibility, because I did  
10:29:40 7 evaluate some of the testimony of the other witnesses. I  
10:29:45 8 did some of the -- I reviewed the material that I had done  
10:29:50 9 before, because, as I said, I don't do ETS all of the  
10:29:55 10 time. Sometimes I'm in other activities. So I had to  
10:29:59 11 refresh my memory.  
10:30:00 12 Q You mean reading the articles that you had  
10:30:03 13 written before?  
10:30:04 14 A Well, reading -- reading at least the  
10:30:06 15 articles that I had written before. Some of the Cal  
10:30:11 16 EPA-related documents that I had examined before, I did a  
10:30:21 17 literature -- a variety of literature searches because I  
10:30:24 18 realized from when I had been active in that area, some  
10:30:28 19 time had passed. So I tried to get up to speed. So it  
10:30:32 20 was mainly looking at a lot of issues.  
10:30:34 21 And I think, as the project developed and I  
10:30:40 22 realized that I was working, looking at a whole bunch of  
10:30:44 23 different issues, some of which were peripherally related  
10:30:50 24 to my expertise, we came to the conclusion that really I  
10:30:53 25 should focus in on a few -- a few issues.  
10:30:55 26 That's how it evolved. It -- it was  
10:31:02 27 primarily reading, updating, thinking, and, you know, some  
10:31:07 28 analysis, future analysis.  
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10:31:08 1 Q Of the approximately 200 hours that you've  
10:31:27 2 spent on the case, how much of that time was spent in  
10:31:31 3 reviewing the testimony of others?  
10:31:34 4 A It's very hard to say.  
10:31:35 5 Q What's your best estimate?  
10:31:38 6 A 30 percent or so. It was more than just  
10:31:47 7 reviewing. It was reviewing and commenting on them. And  
10:31:51 8 there were times when I had to delve more deeply than just  
10:31:59 9 looking at the deposition. I mean, the declarations and  
10:32:03 10 testimony. There were times when a witness made a  
10:32:09 11 statement, cited a reference, and then I went to look at  
10:32:12 12 the reference and saw whether there was validity in the  
10:32:15 13 statement that they were making.  
10:32:17 14 Q Whose testimony did you review?  
10:32:19 15 MR. STONE: Let me interrupt for just a  
10:32:20 16 second, Mr. Hulburt, because I think it bears on this.  
10:32:24 17 What I didn't realize is some notes I had are  
10:32:28 18 notes prepared by Dr. Witorsch with regard to his review  
10:32:32 19 of the testimony of others, and I had those number stamped  
10:32:39 20 and faxed down this morning. They are number stamped P65  
10:32:43 21 RJW 0000450 through 469. And I don't mean to interrupt

10:32:57 22 your examination. But I want you to have a copy of these  
10:33:00 23 which I just got. And I apologize that I didn't realize  
10:33:04 24 that these were Dr. Witorsch's notes before this.  
10:33:07 25 BY MR. HULBURT:  
10:33:07 26 Q Let me just show these to you, Dr. Witorsch,  
10:33:19 27 and ask you to tell me what is that packet of  
10:33:22 28 information -- or that packet of notes.

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10:33:24 1 A Well, I was looking at various -- various  
10:33:28 2 documents generated from either depositions -- I think at  
10:33:32 3 this point it was declarations. And I was asked to give  
10:33:36 4 my scientific opinion of what they said, whether there was  
10:33:40 5 validity. And I was asked to provide for the client, in  
10:33:47 6 this case, Mr. Ely, possible lines of inquiry that could  
10:33:52 7 be asked on further inquiry. So I was a scientific  
10:33:56 8 consultant, if you will.

10:33:57 9 Q And these notes that Mr. Stone just gave to  
10:34:00 10 me, they are what? They're the result of that work that  
10:34:03 11 you just described?

10:34:04 12 A I believe so. And yes.

10:34:06 13 Q Well, take a look at it to make sure because  
10:34:09 14 I want to make sure I understand what this packet of  
10:34:11 15 documents is.

10:34:12 16 A Okay. The first packet is my analysis of the  
10:35:02 17 testimony that Joad gave -- I must indicate that at one  
10:35:07 18 point, I wasn't aware of the procedure. And I was calling  
10:35:10 19 declarations, depositions. So I don't know specifically  
10:35:13 20 whether this was in response to a declaration or a  
10:35:17 21 deposition. But this is some statement that Jessy Joad  
10:35:21 22 had made regarding various areas of ETS and the health  
10:35:28 23 effects in children.

10:35:30 24 Q What pages are those, if you can refer to  
10:35:34 25 those numbers in the right? Just use the last three  
10:35:37 26 numbers.

10:35:38 27 A 450 to 458 is a Joad -- I call it Joad  
10:35:46 28 testimony. So it's an analysis plus providing possible

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10:35:51 1 lines of inquiry. What I was advising the lawyer, these  
10:35:56 2 are the -- these are what I think are inaccuracies or weak  
10:36:04 3 statements that could be pursued further. And I gave them  
10:36:07 4 some direction. I was assisting the lawyer in that  
10:36:10 5 particular area.

10:36:11 6 Q When? What's the date of those notes?

10:36:13 7 A It says 3/9/00 -- it's just stamped 3/9/00.  
10:36:19 8 So it was sometime in late February, early March, I would  
10:36:23 9 believe.

10:36:23 10 Q All right. What else is in there?

10:36:28 11 A The next one is another document that goes  
10:36:30 12 from page 459 to 462. And it's much of the same regarding  
10:36:46 13 the Pinkerton testimony. And just trying to refresh my  
10:36:52 14 memory. Pinkerton talked about rather than the  
10:36:56 15 epidemiology, he talked about the animal studies  
10:37:00 16 supporting the association between ETS and respiratory  
10:37:05 17 health effects.

10:37:06 18 And then the next document, which goes from  
10:37:18 19 page 463 to 468, is dealing with Slotkin's testimony, and  
10:37:39 20 that deals with issues pertaining to the uptake of fetuses  
10:37:48 21 of nicotine and what effect nicotine might have, I think,  
10:37:53 22 in utero, if I'm not mistaken, and possibly postpartum.

10:37:58 23 Q What is the date of that work that you did,  
10:38:00 24 the day of your notes?

10:38:01 25 A Also 3/9. I must have had all three -- I  
10:38:05 26 must have. My recollection is that I had all three



10:38:08 27 documents. I believe they were declarations. I was asked  
10:38:10 28 to look at them and give a scientific analysis and provide  
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10:38:15 1 lines of inquiry.  
10:38:16 2 Q So is the Pinkerton one also dated 3/9 of  
10:38:21 3 2000?  
10:38:22 4 A That's right.  
10:38:22 5 And then at the end, there are two pages that  
10:38:25 6 are -- must be -- there are one -- the last page I told  
10:38:33 7 you was 466 -- 468, right.  
10:38:40 8 Q Right.  
10:38:40 9 A 468 and 469 are out of sequence, but they  
10:38:44 10 seem to be narratives of some sort. I know they are ones  
10:38:47 11 that I gave. One deals with my comments on some comments  
10:38:54 12 Pinkerton made about the rat studies of which Joad et al.,  
10:39:06 13 and others -- I think they collaborated of some sort. And  
10:39:11 14 it's my commentary on their animal studies, some specifics  
10:39:17 15 about the methodology and design of the study that I had  
10:39:24 16 some comments on.  
10:39:26 17 And the last one is some comments I had  
10:39:32 18 regarding -- oh, yes. It's the Slotkin declaration, and  
10:39:37 19 it pertains to the discrepancy between ETS exposure levels  
10:39:47 20 and active smoking exposure levels.  
10:39:50 21 MR. STONE: As Dr. Witorsch noted, I think  
10:39:54 22 the last two documents were -- are out of order after they  
10:39:57 23 were copied this morning. And so the last number of the  
10:40:01 24 document produced is 470, rather than 469.  
10:40:10 25 BY MR. HULBURT:  
10:40:10 26 Q These last two, the narrative comments, when  
10:40:13 27 were -- when were they done? You know, what's the date  
10:40:17 28 they --  
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10:40:17 1 A Let me see if I can remember. Well, I think  
10:40:20 2 they probably -- they belong -- one belongs on the back of  
10:40:24 3 the Slotkin testimony, and the other one belongs on the  
10:40:28 4 back of the Pinkerton because I'm referring to something  
10:40:35 5 these people have stated.  
10:40:36 6 Q So you think they're just parts of the other  
10:40:38 7 pages?  
10:40:38 8 A Parts of, yes.  
10:40:39 9 Q Okay.  
10:40:39 10 A Let's see if I get any clues here. Oh.  
10:40:43 11 There are other -- I was just looking whether I had faxed  
10:40:46 12 them -- no. I was looking at the fax dates to see whether  
10:40:50 13 I'd get some clue.  
10:40:51 14 Q Do you have any other notes, memos, reports,  
10:40:56 15 letters that relate to your review of the testimony or the  
10:40:59 16 declarations of Joad, Pinkerton, and Slotkin?  
10:41:04 17 A That I haven't turned over to you? Is that  
10:41:08 18 it?  
10:41:08 19 Q Yes.  
10:41:13 20 A I might have files of a lot of documents and  
10:41:18 21 notes that I accumulated in that research, because I have  
10:41:22 22 a large box at home of material. And those are -- the  
10:41:28 23 reprints that I requested to follow up on, on these, but  
10:41:35 24 I'm not sure whether I have anything of -- substantive in  
10:41:41 25 there, the note file. I was asked to submit this last  
10:41:44 26 week, and I tried to get together what I could. That was  
10:41:48 27 the -- you know, that I had on my desk immediately at  
10:41:51 28 hand, that was the essence of what I prepared.  
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10:41:58 1 Q You mean last week you were asked to produce  
10:42:00 2 your file? Is that what you are talking about?

10:42:02 3 A Last week I was asked to fax my file to  
10:42:05 4 California.  
10:42:05 5 Q Okay. And I saw in here somewhere there's a  
10:42:08 6 fax cover page from you with something like 141 pages?  
10:42:13 7 A That's the material that I faxed, yes.  
10:42:15 8 Q All right. Now, am I understanding, though,  
10:42:17 9 that that is not the entirety of your file?  
10:42:19 10 A That's not the entirety of my file. There  
10:42:21 11 are reprints.  
10:42:22 12 Q Okay. Other than copies of articles and the  
10:42:24 13 141 pages that got sent, what else is in your file that I  
10:42:29 14 don't have?  
10:42:29 15 A There might be notes, but to the best of my  
10:42:33 16 recollection, those are the reprints.  
10:42:38 17 Q What was your understanding of what you were  
10:42:50 18 asked to produce when you were asked to send your file?  
10:42:55 19 A My understanding was to produce the notes of  
10:43:04 20 anything that I have addressed that dealt with my  
10:43:09 21 deliberations in this particular issue.  
10:43:11 22 Q And did you do that?  
10:43:13 23 A I think I -- you know, I did the best I could  
10:43:17 24 in the time allowed.  
10:43:18 25 Q How much time have you spent consulting with  
10:43:28 26 the attorneys in this case?  
10:43:31 27 A That, again, would be an estimate. I would  
10:43:35 28 say I met with Mr. Ely on several occasions.  
Vail, Christians & Associates (619)544-8344 53  
10:43:46 1 Q How many?  
10:43:48 2 A If I gave you a number, it would not be an  
10:43:51 3 accurate number. I'd only have to ballpark it.  
10:43:54 4 Q Give me a range, then. Best estimate range.  
10:43:56 5 A Okay. Two to five, perhaps. I also --  
10:44:05 6 Q How much time on those?  
10:44:07 7 A Those were days I went up to Washington.  
10:44:10 8 Q Two to five days?  
10:44:11 9 A Yes.  
10:44:11 10 Q Okay.  
10:44:16 11 A I also met with Mr. Cafferty and  
10:44:22 12 Mr. Holtmann for a half day in Richmond last week. And  
10:44:28 13 there was a conference call involved, which Mr. Ely and an  
10:44:37 14 associate from Covington were involved in the call.  
10:44:40 15 Q Okay.  
10:44:45 16 A And we may have had one or two conference  
10:44:48 17 calls in that interim for a couple hours at a time.  
10:44:54 18 Again, this is an estimate, based on my recollection.  
10:44:59 19 Q Have you worked with anyone else in this case  
10:45:15 20 besides the lawyers?  
10:45:20 21 A I'm trying to think. I may have discussed  
10:45:24 22 certain issues with my brother on the phone, scientific  
10:45:30 23 issues, just to sort of get a balance of opinion. But --  
10:45:36 24 Q Tell me what you discussed with your brother,  
10:45:39 25 Philip.  
10:45:39 26 A I don't recall. I don't recall. Probably,  
10:45:46 27 you know, my feeling about what I've read and something  
10:45:49 28 like that. But I don't remember specifically.  
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10:45:51 1 Q When -- when your brother, Philip, called you  
10:45:56 2 originally to talk about there's this new assignment, do  
10:45:59 3 you want to do it, was there any discussion as to why it  
10:46:02 4 was going to be you and not he that would pursue the  
10:46:06 5 project?  
10:46:06 6 MR. STONE: Objection; misstates the  
10:46:08 7 witness's prior testimony regarding the initial contact.

10:46:11 8 You can answer as best you can.  
10:46:17 9 THE WITNESS: I really, you know, don't  
10:46:19 10 recall. I don't recall. He said would you be interested  
10:46:21 11 in doing it. He said it might be higher profile than we  
10:46:24 12 usually do. And think it over.  
10:46:29 13 BY MR. HULBURT:  
10:46:29 14 Q Did you have any reservations about getting  
10:46:34 15 involved?  
10:46:34 16 A Well, it is a controversial issue, to be very  
10:46:40 17 frank. The issue is one that sometimes has higher profile  
10:46:47 18 than many others. The opinions are very strong, and I  
10:46:50 19 assumed there is a risk involved in doing something,  
10:46:56 20 taking a, quote, unpopular, end quote, stand on an issue.  
10:47:03 21 And I opted to do it because I felt that I was very  
10:47:06 22 comfortable in the science, and there comes a time when,  
10:47:10 23 you know, you really have to, you know, take the bull by  
10:47:16 24 the horns, if you will.  
10:47:17 25 Q Much of the work that you've done on the  
10:47:21 26 subject of ETS you've done with your brother, Philip, is  
10:47:26 27 that -- is that true?  
10:47:26 28 A Well, at least conferring with him. A lot of  
10:47:30 1 times, I've done much of the work myself. 55  
10:47:32 2 Q I say that because --  
10:47:35 3 A In the collaborative sense, yes.  
10:47:36 4 Q In many of the publications that I've looked  
10:47:39 5 at --  
10:47:39 6 A That's right.  
10:47:40 7 Q -- you both are --  
10:47:42 8 A That's right.  
10:47:43 9 Q -- identified.  
10:47:44 10 A That's right. If both of our names on, there  
10:47:49 11 has been some amount of activity. It might have been  
10:47:53 12 editing. It might have been discussing how we're going to  
10:47:58 13 approach an issue in terms of interpretation, how it's  
10:48:00 14 going to be worded, the way any two scientists would  
10:48:04 15 discuss their work.  
10:48:05 16 Q All right. But am I understanding correctly  
10:48:09 17 that in those instances, you were doing -- you were  
10:48:12 18 probably doing more work on the ETS issue than your  
10:48:14 19 brother, Philip?  
10:48:15 20 A I think in the area of respiratory health  
10:48:17 21 effects in children and in the issue of intrauterine  
10:48:22 22 growth retardation, we did most of the -- I did most of  
10:48:28 23 the work.  
10:48:28 24 In the area of respiratory health effects in  
10:48:31 25 adults, because we have published in that area, it's  
10:48:34 26 been -- in large measure, he's done the lion's share of  
10:48:37 27 the work.  
10:48:38 28 Q All right.  
10:48:39 1 Vail, Christians & Associates (619)544-8344 56  
10:48:43 2 A I might add one other thing. My brother is a  
10:48:47 3 board certified pulmonologist. So very often with regard  
10:48:51 4 to the issues pertaining to respiratory diseases and  
10:48:56 5 spirometry tests, functional tests, I felt very  
10:49:00 6 comfortable having his input because he had more -- has  
10:49:04 7 more experience and authority in those particular areas.  
10:49:09 8 Q Did anybody help you in this case, in reading  
10:49:12 9 the articles, summarizing them, acquiring the data, any of  
10:49:16 10 the work like that that you ultimately are relying on?  
10:49:18 11 A Well, in the memoranda that are listed in the  
10:49:24 12 mailing that I gave you, the 141 pages there, there are  
several correspondences, faxes, to an individual who does

10:49:32 13 the library searches for me, because that would be a  
10:49:35 14 tremendous amount of time. So I would --

10:49:37 15 Q Kit?

10:49:38 16 A Kit.

10:49:38 17 Q You're talking about Kit?

10:49:40 18 A Yes.

10:49:40 19 Q All right. So Kit got the articles for you?

10:49:43 20 A Kit got the articles for me or she sent me a  
10:49:46 21 list of what are the relevant -- the relevant articles in  
10:49:49 22 the -- in a particular area. Then I would screen the  
10:49:54 23 titles. She would send me, depending on the time, the  
10:50:00 24 turnaround time, either the entire article or the abstract  
10:50:05 25 of the article. And I would make a judgment on whether I  
10:50:07 26 would wanted to pursue that article further, because there  
10:50:11 27 is so much of a cost of reproducing the articles and the  
10:50:15 28 turnaround time. So we did it with the abstracts  
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10:50:17 1 initially.

10:50:18 2 Q Kit works for CEHHT?

10:50:20 3 A That's right.

10:50:21 4 Q And -- but the question I'm -- and maybe  
10:50:24 5 you've answered it already. But the question I'm trying  
10:50:26 6 to get to is other than this person who is doing the  
10:50:29 7 searches for you and getting the reprints for you, did  
10:50:32 8 anybody do any of the reading, summarizing, reviewing of  
10:50:36 9 any of the articles for you?

10:50:37 10 A No. I looked at everything.

10:50:38 11 MR. STONE: Don't rock.

10:50:50 12 THE WITNESS: I'm -- I'm sorry.

10:50:52 13 BY MR. HULBURT:

10:50:52 14 Q What -- we talked about the Cal EPA thing a  
10:51:00 15 little bit.

10:51:01 16 What other government investigations,  
10:51:09 17 hearings, inquiries, have you participated in besides the  
10:51:12 18 Cal EPA on the subject of ETS?

10:51:15 19 A I have participated in the OSHA hearings.  
10:51:18 20 That was sometime, I think, in the fall of 1994. I gave a  
10:51:25 21 testimony on ETS and intrauterine growth retardation at  
10:51:30 22 the OSHA hearings. And --

10:51:32 23 Q That's a U.S. OSHA?

10:51:34 24 A U.S. OSHA.

10:51:37 25 And I also attended several of the U.S. EPA  
10:51:48 26 hearings on ETS. It's been quite a while ago. It's  
10:51:51 27 almost nine or ten years ago. I prepared some of the  
10:51:55 28 position papers on the U.S. EPA report.  
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10:52:00 1 Q Position papers for --

10:52:02 2 A In terms of ETS, yes.

10:52:04 3 Q Position papers submitted by The Tobacco  
10:52:06 4 Institute?

10:52:07 5 A That's right. Well, I would assume -- my  
10:52:11 6 name was on the paper. I don't know who -- under whose  
10:52:16 7 cover it was, whether it was -- but it was -- we had a  
10:52:19 8 cover sheet where we represented, and it was an analysis  
10:52:24 9 of the U.S. EPA report. And I think that was primarily on  
10:52:27 10 respiratory health effects in adults and children. I'm  
10:52:32 11 not sure. I don't recall whether I did IUGR at the time.

10:52:38 12 Q Any others where you've been involved in any  
10:52:46 13 work that some public health agency is investigating,  
10:52:52 14 researching, exploring?

10:52:56 15 A I once, when I was a consultant on the red  
10:53:00 16 dye No. 3 issue, which goes back to the mid to late  
10:53:07 17 eighties, it was a two- or three-year project, we

10:53:11 18 submitted several analytical papers to the Food and Drug  
10:53:15 19 Administration. And we also -- as a result of that work,  
10:53:22 20 we actually did some research on that issue and published  
10:53:26 21 some papers in several journals.

10:53:28 22 Q Okay. You've answered the question I asked,  
10:53:33 23 but I was not specific enough.

10:53:35 24 Are there any other public health agencies  
10:53:38 25 where you've submitted information or testimony or papers  
10:53:40 26 related to ETS, besides Cal EPA, OSHA, and U.S. EPA?

10:53:46 27 A Not to my recollection.

10:53:49 28 Q How about outside America, have you submitted  
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10:53:53 1 anything, testimony or papers for any foreign agencies  
10:53:59 2 related to ETS?

10:54:00 3 A I've done some work outside of the U.S., but  
10:54:03 4 I -- I don't recall. I don't think so. I say "think"  
10:54:12 5 because there may be one that I omitted, but I don't  
10:54:16 6 recall I did.

10:54:16 7 Wait a second. I'm sorry. I do recall doing  
10:54:21 8 some work reviewing the Australian ETS report. I don't  
10:54:27 9 recall whether I issued any commentary on it. But I do  
10:54:34 10 recall looking at the document and either providing some  
10:54:39 11 insight or writing a document. It was probably in the  
10:54:44 12 early nineties when I did that.

10:54:46 13 Q Do you know if any of your work was submitted  
10:54:52 14 to the Australian agency?

10:54:55 15 A Well, I don't offhand. I would like to think  
10:54:58 16 it wasn't submitted with my -- without my approval, but I  
10:55:02 17 don't recall.

10:55:03 18 Q Do you know what agency that was that was  
10:55:05 19 doing the ETS work?

10:55:06 20 A I think it was the Australian equivalent of  
10:55:10 21 the Environmental Protection Agency. I've seen -- you  
10:55:14 22 know, I don't know whether I've had a public posture. But  
10:55:18 23 through the years, I think I've had an opportunity to look  
10:55:21 24 at and evaluate the Canadian report.

10:55:25 25 Again, I don't remember having as an  
10:55:31 26 extensive or high profile involvement in these foreign  
10:55:35 27 reports as I've had in the U.S.

10:55:37 28 Q In your -- excuse me.  
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10:55:39 1 In your involvement with the Australian  
10:55:42 2 report, were you providing a role where you were  
10:55:46 3 critiquing the report to provide assistance to the  
10:55:48 4 lawyers --

10:55:48 5 A That's right.

10:55:49 6 Q -- so they could --

10:55:50 7 A That's right.

10:55:51 8 Q -- suggesting to them areas where they might  
10:55:53 9 want to go?

10:55:54 10 A Yes.

10:55:54 11 Q The same work in the Canadian report?

10:55:56 12 A Perhaps. I don't recall specifically. But  
10:55:58 13 it would be that type of work, yes.

10:56:02 14 I'd also like to add if I saw strengths in  
10:56:06 15 the report, I would put the strengths in the report as  
10:56:08 16 well. It wasn't as though I was doing something to  
10:56:11 17 patronize the client.

10:56:12 18 Q In the written papers that were submitted  
10:56:28 19 under your name to the Cal EPA related to ETS, I want to  
10:56:33 20 understand what role the lawyers played in the final  
10:56:38 21 versions of the papers that got submitted.

10:56:41 22 You told me already that you worked with the

10:56:43 23 lawyers at Covington & Burling on that assignment for Cal  
10:56:48 24 EPA; is that right?  
10:56:49 25 A Yes.  
10:56:50 26 MR. STONE: Objection. Let me just make an  
10:56:52 27 objection first. Compound and inappropriately attempts to  
10:56:57 28 summarize the witness's prior testimony.  
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10:56:59 1 You can answer the pending question, as I  
10:57:01 2 think you did.  
10:57:02 3 BY MR. HULBURT:  
10:57:02 4 Q You said "yes"?  
10:57:03 5 A I did -- there was some interaction with  
10:57:07 6 lawyers, yes.  
10:57:07 7 Q And were all those lawyers from Covington &  
10:57:09 8 Burling?  
10:57:13 9 A To the best of my recollection.  
10:57:14 10 Q All right. What interaction did you have  
10:57:18 11 with the Covington & Burling lawyers related to the Cal  
10:57:21 12 EPA project?  
10:57:22 13 A Well, I think through the years, I've had  
10:57:27 14 minimal, if any, editorial commentary on the work that  
10:57:34 15 I've done. As a courtesy, when we submit -- when we  
10:57:39 16 finish the work -- well, the way I usually do it is I  
10:57:43 17 submit the work. I send it to the center because they  
10:57:46 18 have the facilities and they take care of sending it out.  
10:57:49 19 It's my understanding they usually sent it out to the  
10:57:52 20 attorneys who then sent it out under official cover, I  
10:58:00 21 guess.  
10:58:01 22 I might add that in all of the years of my  
10:58:05 23 dealing with the attorneys, I have virtually no commentary  
10:58:11 24 on what I've said scientifically, no attempt whatsoever at  
10:58:17 25 changing what I've said.  
10:58:20 26 Perhaps, on occasion, there may have been a  
10:58:25 27 suggestion on how something was phrased, but it was our  
10:58:27 28 option to agree with them. And usually they were so  
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10:58:31 1 minimal that they didn't have much of an impact.  
10:58:36 2 But in summation, I would say that their  
10:58:39 3 involvement was -- they asked us to do it. We did it, and  
10:58:42 4 they submitted it.  
10:58:43 5 Q Did they give you the areas that they wanted  
10:58:45 6 you to focus on?  
10:58:48 7 A Well, I don't know whether the lawyers gave  
10:58:50 8 it or when Phil would contact me, he would say this is the  
10:58:54 9 area I'd like you to write on. I'm not sure. There may  
10:58:57 10 have been some negotiation between Phil and the attorneys,  
10:59:01 11 but there was certainly none between me and the attorneys  
10:59:04 12 in terms of the assignments.  
10:59:06 13 Q Is it your impression that your brother,  
10:59:09 14 Philip, had more contact with the tobacco industry related  
10:59:12 15 to the assignment than you did?  
10:59:13 16 A Absolutely.  
10:59:14 17 Q For the Cal EPA project?  
10:59:16 18 A For the initial contact, yes. Yes.  
10:59:17 19 Q So is it your understanding that the focus of  
10:59:22 20 the effort was discussed primarily between the attorneys  
10:59:25 21 and Philip rather than the attorneys and you?  
10:59:27 22 A I think that happened on some occasions. I  
10:59:29 23 do recall there were times when I believe Clausen may have  
10:59:33 24 called up Phil, and Phil would say, well, you can call Ray  
10:59:38 25 directly because I'm tied up. I'm attending or I have  
10:59:41 26 another client.  
10:59:41 27 So there have been interactions through the

10:59:44 28 years where the attorney has contacted me and I've  
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10:59:46 1 negotiated. But it's not been, to the best of my  
10:59:50 2 knowledge, direct. It's been somewhere -- there's been  
10:59:53 3 some interaction.

10:59:54 4 But because I've had more time on my hands or  
10:59:57 5 more availability, I have interacted with the attorneys in  
11:00:02 6 terms of the specifics, what -- what they would like me to  
11:00:05 7 do. However, they've usually been the topics I've dealt  
11:00:11 8 with in the past, the IUGR, respiratory health effects in  
11:00:15 9 children.

11:00:15 10 Q In the reports that got submitted to the Cal  
11:00:20 11 EPA, under both of your names --

11:00:21 12 A Yes.

11:00:22 13 Q -- you and your brother, Philip, who did the  
11:00:27 14 writing?

11:00:27 15 A I think the primary writing on that, the one  
11:00:32 16 with children, was myself. I think there was a chapter on  
11:00:38 17 adults where he did most of the primary writing, because  
11:00:43 18 that was his primary expertise. And at one point, on one  
11:00:46 19 of those documents, I think ones that were done in the  
11:00:49 20 final draft -- my brother has another partner who is a  
11:00:54 21 toxicologist, who has expertise in causation, Sorell  
11:01:00 22 Schwartz. He's also a professor of emeritus at  
11:01:04 23 Georgetown.

11:01:05 24 And Sorell worked with me on some of the  
11:01:09 25 issues related to causation and interpretation of the  
11:01:13 26 results. He wrote a section. I wrote a section. We  
11:01:17 27 bounced it back and forth, but it was that type of work.

11:01:21 28 Q You've published several articles,  
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11:01:27 1 frequently, with your brother, Philip, related to these  
11:01:31 2 issues of ETS and children and IUGR and the issues that  
11:01:37 3 you've talked about and we'll talk about today.

11:01:39 4 Are those articles the result of some  
11:01:42 5 assignment from the tobacco industry through CEHHT?

11:01:45 6 A Yes. Usually, it's an assignment to do a  
11:01:53 7 defined project. You know, would you look at the  
11:01:56 8 literature in this particular area. Would you update the  
11:01:59 9 literature. And, eventually, the client has come back and  
11:02:04 10 said would you be willing to write a paper on that  
11:02:07 11 particular issue as well.

11:02:08 12 Q So -- so some number of times, the assignment  
11:02:12 13 has been please review the literature and produce a  
11:02:15 14 publishable paper --

11:02:17 15 A Yes.

11:02:17 16 Q -- critiquing it?

11:02:20 17 A Yes. And we've acknowledged that in the  
11:02:22 18 manuscript as well.

11:02:23 19 Q Give me some estimate of how many times that  
11:02:27 20 has been the assignment. Review the literature and  
11:02:30 21 produce a paper that we can publish, critique --

11:02:32 22 A Well, whatever paper, that has usually been  
11:02:36 23 published in the area of ETS because of our other  
11:02:39 24 interests. Any time there's a paper in my C.V. that has  
11:02:43 25 an issue, that's been one that has evolved with some  
11:02:45 26 encouragement or support from the tobacco industry.

11:02:48 27 Q Sometimes the acknowledgment says this paper  
11:02:54 28 is supported in part by The Tobacco Institute or is  
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11:02:57 1 supported in part by Philip Morris.

11:03:02 2 Is there support from any other sources?

11:03:04 3 A There's no financial support from another

11:03:07 4 source. I really don't know why that it says in part. I  
 11:03:10 5 mean, we don't use -- when I do the academic stuff -- I  
 11:03:13 6 mean, when I do a publication, I do not acknowledge -- I  
 11:03:17 7 do not use university facilities. I have my own home  
 11:03:22 8 facilities. The implication of the term "in part" is not  
 11:03:28 9 that there was another sponsor.

11:03:30 10 Q So is it the reality that any article that  
 11:03:33 11 you've published on the subject of ETS was paid for in  
 11:03:36 12 full by some version of the tobacco industry?

11:03:39 13 A That's correct.

11:03:40 14 MR. STONE: Objection. Lacks foundation as  
 11:03:41 15 to the effects of articles that he's written with other  
 11:03:46 16 authors, calls for speculation.

11:03:47 17 You can answer based on your knowledge.

11:03:50 18 THE WITNESS: Okay. Based on my knowledge,  
 11:03:51 19 it's been supported in full by the tobacco industry. We  
 11:03:58 20 bill them for our time. I assume the center will bill  
 11:04:03 21 them for whatever other office services usually are  
 11:04:11 22 incurred.

11:04:11 23 Any types of facilities that I use at my home  
 11:04:14 24 office, I generally don't bill the client for. Maybe  
 11:04:19 25 occasional if it's excessive postage or something like  
 11:04:23 26 that.

11:04:23 27 BY MR. HULBURT:

11:04:23 28 Q Is it your understanding that there is a  
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 11:04:27 1 global strategy in the tobacco industry to have  
 11:04:30 2 scientists, like you, who are reviewing the research of  
 11:04:33 3 others, for critique?

11:04:35 4 MR. STONE: Objection; lacks foundation,  
 11:04:37 5 vague and ambiguous, assumes facts not in evidence.

11:04:39 6 MR. LENDRUM: Join in the objection.

11:04:42 7 THE WITNESS: Could you rephrase the question.

11:04:43 8 BY MR. HULBURT:

11:04:43 9 Q Yeah.

11:04:44 10 Is it your understanding that part of the  
 11:04:46 11 global strategy of the tobacco industry in dealing with  
 11:04:48 12 the subject of environmental tobacco smoke is to have  
 11:04:51 13 scientists, like you, who will criticize the scientific  
 11:04:55 14 research of others?

11:04:58 15 MR. STONE: Objection; lacks foundation,  
 11:04:59 16 vague and ambiguous, assumes facts not in evidence,  
 11:05:02 17 misstates the witness's prior testimony with the use of  
 11:05:05 18 the phrase "criticize."

11:05:07 19 You may answer.

11:05:08 20 MR. LENDRUM: I join in the objection.

11:05:11 21 THE WITNESS: I have never regarded myself as  
 11:05:13 22 part of a conspiracy.

11:05:15 23 BY MR. HULBURT:

11:05:15 24 Q I didn't use the word "conspiracy."

11:05:17 25 A Well, part of a strategy. I viewed my  
 11:05:20 26 services as a consultant, and that's what I've always  
 11:05:26 27 viewed the issue as. I looked at the issue purely as a  
 11:05:31 28 scientific issue, and I felt justified in the approach I  
 Vail, Christians & Associates (619)544-8344 67  
 11:05:35 1 took, because I felt the science was not very strong.

11:05:39 2 Q I appreciate how you viewed yourself and the  
 11:05:43 3 work --

11:05:43 4 A Yes.

11:05:44 5 Q -- that you do.

11:05:45 6 A Yes.

11:05:45 7 Q But has it been your understanding that there  
 11:05:48 8 is a global strategy in the tobacco industry to have



11:05:51 9 scientists, like you, who will criticize the work of  
 11:05:53 10 others?

11:05:53 11 MR. STONE: Objection; lacks foundation,  
 11:05:55 12 vague and ambiguous, assumes facts not in evidence, and  
 11:05:59 13 misstates this witness's prior testimony with respect to  
 11:06:02 14 the use of the word "criticize."

11:06:04 15 You may answer.

11:06:05 16 THE WITNESS: To tell you very honestly, the  
 11:06:08 17 thought of it being a strategy has never entered my mind  
 11:06:12 18 until now, because I haven't thought in those terms.

11:06:16 19 BY MR. HULBURT:

11:06:16 20 Q Have you seen any memos that describe a  
 11:06:19 21 global strategy on behalf of any of the tobacco companies  
 11:06:24 22 similar to what I've been asking you here?

11:06:26 23 A No, I have not.

11:06:27 24 Q Have you talked with any of the attorneys  
 11:06:31 25 about any memos that describe a global strategy related to  
 11:06:35 26 the environmental tobacco smoke issue?

11:06:37 27 A Pat Cafferty had mentioned to me at a  
 11:06:41 28 previous meeting, the types of questions that I might be  
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11:06:45 1 asked. And he did mention something about a Sharon Boyse  
 11:06:50 2 memorandum and the essence of that memorandum.

11:06:54 3 Q Do you know Sharon Boyse?

11:06:55 4 A I know her, yes.

11:06:56 5 Q How do you know her?

11:06:57 6 A Well, I've worked with her. I've done work  
 11:07:01 7 at her request.

11:07:03 8 Q Who is Sharon Boyse?

11:07:08 9 A My understanding is she's a scientific  
 11:07:10 10 director of BAT stationed with Brown and Williamson in  
 11:07:17 11 Kentucky.

11:07:18 12 Q And what work have you done with Sharon  
 11:07:20 13 Boyse --

11:07:20 14 A Well --

11:07:22 15 Q Let me stop you.

11:07:23 16 A I'm sorry.

11:07:24 17 Q We're starting to talk over each other too  
 11:07:27 18 much.

11:07:27 19 A I'm sorry.

11:07:28 20 Q And the court reporter has been polite enough  
 11:07:30 21 not to kick us yet.

11:07:32 22 A I'm sorry.

11:07:32 23 Q But you've got to wait until I finish the  
 11:07:34 24 question.

11:07:35 25 What work have you done with Sharon Boyse?

11:07:37 26 A Well, there have been times when she's asked  
 11:07:40 27 us to attend conferences to talk about ETS, and I've  
 11:07:43 28 attended these conferences.  
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11:07:45 1 Q What kind of conferences?

11:07:48 2 A There was a conference of scientists in 1996  
 11:07:56 3 where we visited four cities in Central America. And I  
 11:08:05 4 talked about the ETS issue. And she talked about the  
 11:08:11 5 active smoking issue and the addiction issue. And it was  
 11:08:17 6 my understanding that they were -- they were talking to --  
 11:08:22 7 gee, I really -- I'm trying to think. Sometimes they were  
 11:08:25 8 industrial -- industry representatives. There may have  
 11:08:28 9 been journalists that they were talking to as well. But I  
 11:08:31 10 gave seminars.

11:08:32 11 Q Who -- who was the sponsor or the organizer?

11:08:34 12 A That was I think Brown and Williamson,  
 11:08:37 13 British American Tobacco.

11:08:38 14 Q Speaking to scientists, you think, or  
11:08:40 15 speaking --  
11:08:41 16 A No. They weren't -- I have had occasion to  
11:08:44 17 speak to scientists from time to time, going to meetings.  
11:08:47 18 This was talking to sometimes people working  
11:08:52 19 at these companies. Other times, they were --  
11:08:56 20 Q At what companies?  
11:08:57 21 A At the companies, the -- the Latin American  
11:09:03 22 offices of Brown and Williamson.  
11:09:05 23 Q Oh. Tobacco companies?  
11:09:07 24 A Yeah. Tobacco companies.  
11:09:08 25 Q Uh-huh.  
11:09:09 26 A And some occasions, they may have been  
11:09:11 27 journalists.  
11:09:11 28 Q Okay. What other work have you done with  
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11:09:13 1 Sharon Boyse?  
11:09:14 2 A Sharon has enlisted me, my services, to give  
11:09:18 3 a -- to do an extensive review of the literature in  
11:09:24 4 respiratory health effects in children, which is basically  
11:09:29 5 being completed right now, and has asked me to write a  
11:09:34 6 manuscript, which is currently under review, on the issue  
11:09:38 7 of respiratory health effects in children.  
11:09:42 8 Q Under review by whom?  
11:09:43 9 A It's a journal, Indoor Air and Built  
11:09:50 10 Environment.  
11:09:51 11 THE REPORTER: Indoor Air and --  
11:09:51 12 THE WITNESS: And Built Environment.  
11:09:51 13 It's a -- I think it's a European-based  
11:09:56 14 journal. I think the major office is in the UK.  
11:10:00 15 BY MR. HULBURT:  
11:10:00 16 Q That's a journal that you've published  
11:10:03 17 several of your articles in?  
11:10:04 18 A Yes.  
11:10:04 19 Q Are there tobacco company representatives on  
11:10:12 20 the editorial board of that journal?  
11:10:15 21 MR. STONE: Objection; lacks foundation.  
11:10:17 22 THE WITNESS: Not to my knowledge.  
11:10:18 23 BY MR. HULBURT:  
11:10:18 24 Q How do you describe that journal in the world  
11:10:26 25 of scientific journals? Where is that one?  
11:10:29 26 A Well, I think it's -- from a nuts and bolts  
11:10:32 27 standpoint, I think it's a very solid journal, because  
11:10:36 28 every paper we've published, the review has literally  
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11:10:39 1 given us a rough time in peer review. We've had to do a  
11:10:43 2 lot of work to get the manuscript in shape to suit their  
11:10:49 3 standards. So whoever they send it to is somewhat of a  
11:10:54 4 task master.  
11:10:55 5 In terms of its profile or stature, I'm not  
11:11:00 6 sure where it stands. I -- I -- I don't believe it has  
11:11:08 7 some of the stature that some of the other journals like  
11:11:11 8 the American Journal of Epidemiology would have. My  
11:11:15 9 opinion is the quality of stuff being published there is  
11:11:20 10 as good, if not better, than the stuff that's being  
11:11:23 11 published in some of the more standard journals.  
11:11:26 12 Q Whose decision was it to submit your article  
11:11:30 13 to that journal rather than to others, or was it sent to  
11:11:33 14 others also?  
11:11:34 15 A Well, the first time we did that is we were  
11:11:36 16 invited to a conference in Switzerland where we first  
11:11:40 17 presented our work, back in 1992. We were asked by the --  
11:11:44 18 as I recall, we were asked by the editors to submit a full

11:11:49 19 article.

11:11:49 20 Q "We" is you and Philip?

11:11:51 21 A My brother and I.

11:11:53 22 Well, the article -- the finished version of

11:11:58 23 the article brought in several other collaborators: Ron

11:12:03 24 Hood, who had done some other work for ETS; Joe Wu, who is

11:12:10 25 another scientist, who just came to my recollection. He's

11:12:12 26 a professor of biochemistry at New York Medical College.

11:12:16 27 Q He's through CEHHT also?

11:12:19 28 A I don't even recall. I don't recall. They  
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11:12:22 1 were -- I'm not even sure whether they subcontracted

11:12:26 2 through CEHHT. I just met them in various interactions,

11:12:32 3 and that's how we became colleagues -- you know, friends

11:12:37 4 and colleagues.

11:12:37 5 So I think we were first invited by this

11:12:40 6 particular journal, which was called Indoor Air, if I'm

11:12:42 7 not mistaken, back in 1992. And they did a very nice job

11:12:46 8 of publishing our article in terms of the quality of the

11:12:53 9 tables, the way they were arranged, the publication time.

11:12:57 10 And I think since that time, the few peer-reviewed

11:13:02 11 articles that we have published, Phil and I, in this

11:13:06 12 particular area, have been to that journal because they

11:13:08 13 have just been a good journal to work with.

11:13:10 14 Q This article that you're working on now

11:13:13 15 that's in review, was there any effort to submit it to any

11:13:16 16 other journal?

11:13:17 17 A No.

11:13:17 18 Q Was the plan always that we'll submit this

11:13:21 19 paper to --

11:13:22 20 A We didn't think about it until we got it into

11:13:25 21 a draft form.

11:13:25 22 Q Did Sharon Boyse request that you submit your

11:13:30 23 article to --

11:13:31 24 A No.

11:13:31 25 Q -- is it Indoor Built; is that right?

11:13:33 26 A Yes. She did not.

11:13:35 27 Q Did she give you any directions at all about

11:13:38 28 where to try to publish the article?  
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11:13:39 1 A No.

11:13:43 2 Q Is this paper, this manuscript that's in

11:13:46 3 review now, is it really a compilation of the work that

11:13:51 4 you've already done?

11:13:53 5 A Yes. It's an update of the work that we

11:13:57 6 published in 1992 to '93, those two papers. It's

11:14:03 7 bringing -- it reviews the literature in toto from 1969

11:14:10 8 through 1998, and that's where the 250-some-odd papers --

11:14:15 9 maybe a few less. But in that ballpark number of papers

11:14:19 10 are reviewed.

11:14:21 11 Q And the focus of that review is respiratory

11:14:24 12 effects on children?

11:14:25 13 A That's correct.

11:14:26 14 Q Not adults?

11:14:27 15 A Not adults.

11:14:28 16 Q And not any other issues besides respiratory

11:14:31 17 function?

11:14:31 18 A Not any other issues besides that.

11:14:33 19 Q Okay. When do you -- when do you expect that

11:14:39 20 it's going to be published?

11:14:41 21 A Well, I have to do some revisions on the

11:14:44 22 manuscript. According to my schedule, because I have

11:14:47 23 other commitments, I would like to have that finished

11:14:53 24 sometime in the middle of August.

11:14:54 25 Q The revisions submitted back?

11:14:57 26 A Yeah. Revised, yes.

11:14:59 27 Q All right. And so what's your expectation of

11:15:03 28 when it will be published, assuming the revisions are  
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11:15:06 1 accepted and it goes forward?

11:15:07 2 A Oh. I would assume that it would be

11:15:11 3 published probably late in 2000, early 2001.

11:15:16 4 Q Are you relying on that manuscript as part of

11:15:24 5 the basis of your opinion in this case?

11:15:28 6 A The data accumulated, yes.

11:15:29 7 Q Really, that's -- that's the font of

11:15:32 8 knowledge that you're bringing to the table --

11:15:33 9 A That's correct.

11:15:34 10 Q -- in this case?

11:15:35 11 A That's correct.

11:15:36 12 Q All right. Have you produced that manuscript

11:15:38 13 in this case?

11:15:39 14 A No, I have not.

11:15:40 15 MR. HULBURT: All right. Can we get that?

11:15:41 16 MR. STONE: No.

11:15:42 17 MR. HULBURT: Why not?

11:15:43 18 MR. STONE: Because it's an ongoing work of

11:15:46 19 his research, and our practice and the practice of your

11:15:50 20 experts in this case has been not to produce ongoing

11:15:53 21 manuscripts or matters that are still in draft.

11:15:55 22 We've given you the bibliography from that

11:15:58 23 paper, which is the list of references, in the documents

11:16:03 24 we've produced.

11:16:04 25 MR. HULBURT: Well, I understand you've given

11:16:10 26 me a list of some hundreds of articles, which may or may

11:16:16 27 not be easily available at the library.

11:16:20 28 BY MR. HULBURT:  
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11:16:20 1 Q But I'm understanding from you, Dr. Witorsch,

11:16:25 2 that this manuscript that you've prepared, summarizes the

11:16:29 3 body of your work on the subject of whether or not there

11:16:32 4 is a health effect between ETS and children; is that

11:16:35 5 right?

11:16:35 6 A Yes.

11:16:37 7 Q Which is exactly the issue that you're going

11:16:40 8 to testify about in this case?

11:16:42 9 A But I --

11:16:42 10 MR. STONE: You can answer.

11:16:44 11 THE WITNESS: Okay. But I provided

11:16:46 12 enumerable summaries. It's a draft of a manuscript that

11:16:51 13 is in preparation. It's not an issue of anything that I'm

11:16:54 14 trying to conceal. It's an unfinished work.

11:16:57 15 BY MR. HULBURT:

11:16:57 16 Q Is it something that you've given to the

11:16:59 17 attorneys at Covington & Burling?

11:17:01 18 A No, I have not.

11:17:02 19 Q Is it something that you've given to

11:17:04 20 Mr. Stone's office?

11:17:05 21 A No, I have not.

11:17:06 22 Q Is it something that you've given to Sharon

11:17:08 23 Boyse?

11:17:09 24 A Sharon Boyse has the first draft that I

11:17:14 25 believe we either sent -- yes. We -- it was Sharon Boyse

11:17:18 26 and Chris Proctor, who were the two principals involved.

11:17:22 27 Chris Proctor is her counterpart, I believe, in the UK.

11:17:28 28 We sent them the document when we felt it was finished, as

11:17:32 1 a courtesy.  
11:17:33 2 She got back to me within 24 hours, and she  
11:17:37 3 said, I think it's a very extensive comprehensive piece of  
11:17:42 4 work submitted. So that was -- no comments whatsoever.  
11:17:51 5 So I had just told her the manuscript is now under  
11:17:54 6 revision. I've told her what the revisions are involved,  
11:17:59 7 because there were various ways we could approach it --  
11:18:01 8 approach it.

11:18:02 9 And I -- I've been working on it, but not as  
11:18:10 10 much as I would like to because my time has been involved  
11:18:13 11 in this particular project. And I haven't even thought  
11:18:17 12 about whether I'm even going to send her a revised  
11:18:20 13 manuscript before I submit it to the journal, or just send  
11:18:23 14 them out simultaneously so I can get the work off my desk  
11:18:27 15 and go on to other things.

11:18:28 16 MR. HULBURT: All right. Let's go off the  
11:18:30 17 record and change the tape.

11:18:31 18 VIDEOGRAPHER: Just a moment, please. This  
11:18:33 19 concludes Tape 1 in the videotaped deposition of Raphael  
11:18:37 20 Witorsch. Off the record at 11:18 a.m.

11:18:40 21 (Recess.)

11:28:23 22 VIDEOGRAPHER: This begins Tape 2 in the  
11:28:36 23 videotaped deposition of Raphael Witorsch. On the record  
11:28:41 24 at 11:28 a.m.

11:28:43 25 BY MR. HULBURT:

11:28:43 26 Q Have you done work related to ETS for which  
11:28:51 27 you understood the client was Philip Morris?

11:28:56 28 A Perhaps. In retrospect, yes.

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11:29:00 1 Q What was that?

11:29:01 2 A I don't know specifically -- oh. Actually,  
11:29:05 3 yes. Because at one point, we were working on a similar  
11:29:11 4 project as the one that we did for Sharon Boyse with some  
11:29:17 5 people at the Philip Morris office. And they had invited  
11:29:21 6 us down to their office in Richmond, my brother and I.  
11:29:25 7 And we conferred on the type of project that we were  
11:29:28 8 doing. And it was an analysis of the literature and the  
11:29:32 9 health effects of ETS in children.

11:29:37 10 The principals were -- the person I  
11:29:42 11 interacted with was a Dr. Ted Saunders. I think he was  
11:29:47 12 from Switzerland. And we worked on that for several  
11:29:51 13 months. This must have been in 1995 or 1996.

11:29:55 14 And then they requested that the project be  
11:29:58 15 terminated and not done, and we just stopped doing the  
11:30:01 16 project.

11:30:02 17 Q The project was a review and critique of the  
11:30:04 18 literature?

11:30:05 19 A Well, it wasn't so much a critique, per se.  
11:30:08 20 It was a tabulation of the essential aspects of these  
11:30:13 21 papers published in the area, much the way I've analyzed  
11:30:18 22 the literature, in the past.

11:30:20 23 Q All right. And what was your understanding  
11:30:23 24 for discontinuing the project?

11:30:26 25 A There was never an explanation. They just  
11:30:29 26 said we got a letter from Mr. Saunders, and he said the  
11:30:36 27 project -- we have no -- we've decided to terminate the  
11:30:39 28 project.

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11:30:39 1 Q Have you done any other work for Philip  
11:30:42 2 Morris?

11:30:43 3 A I assume through the years that -- that I  
11:30:46 4 have been the sponsor. Again, as far as I've been

11:30:51 5 concerned, I've thought of, more or less, the sponsor, if  
 11:30:55 6 you will, as the attorney I worked with and the issue. I  
 11:31:02 7 haven't been concerned that much with who was the  
 11:31:05 8 principal person behind the project. I've been interested  
 11:31:08 9 in the project and my productivity.  
 11:31:12 10 Q Has there always been an attorney involved in  
 11:31:15 11 the work that you've done on ETS for the tobacco industry?  
 11:31:18 12 A Not necessarily, because I've worked  
 11:31:21 13 directly -- I worked directly with Ted Saunders and the  
 11:31:26 14 other person that we conferred with, Richard Carchman.  
 11:31:30 15 And I don't think there was an attorney there. The work  
 11:31:32 16 I've done with Sharon Boyse through the years has been  
 11:31:37 17 directly with Sharon Boyse. Again, it's been at the --  
 11:31:41 18 from these people, through the CEHHT, down to me.  
 11:31:45 19 Q What work did you do with Richard Carchman?  
 11:31:49 20 A Well, that was that project.  
 11:31:51 21 Q The same thing with Ted Saunders?  
 11:31:53 22 A The same thing. We met at Richard Carchman's  
 11:31:55 23 office. He was present at the meetings.  
 11:31:57 24 Q Have you done any work for R.J. Reynolds?  
 11:32:00 25 A Not to my recollection.  
 11:32:01 26 Q How about Lorillard?  
 11:32:03 27 A Not to my recollection.  
 11:32:04 28 Q How about Liggett?  
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 11:32:06 1 A Not to my recollection.  
 11:32:07 2 Q Do you know Dr. Gaisch, G-a-i-s-c-h --  
 11:32:13 3 A No.  
 11:32:13 4 Q -- with Philip Morris?  
 11:32:16 5 A No.  
 11:32:18 6 Q Have you ever had any dealings with David  
 11:32:45 7 Remes?  
 11:32:45 8 A That name doesn't ring a bell at all.  
 11:32:48 9 Q A lawyer at Covington & Burling?  
 11:32:50 10 A That name, I don't recall at all.  
 11:32:52 11 Q Have you had any work that was support -- or  
 11:33:01 12 done any work that was supported by the CIAR, Center for  
 11:33:06 13 Indoor Air Research?  
 11:33:08 14 A No. I had a grant turned down by them at one  
 11:33:10 15 time.  
 11:33:11 16 Q What do you mean by that?  
 11:33:12 17 A I've applied for a grant, and I got it turned  
 11:33:16 18 down. They wouldn't fund the project.  
 11:33:22 19 Q What was the project?  
 11:33:23 20 A I don't recall. But I was -- my ego was  
 11:33:27 21 bruised. I believe -- I don't recall specifically. But  
 11:33:31 22 I -- upon reflection, I think it was a project dealing  
 11:33:36 23 with the fetotoxic effects of environmental tobacco  
 11:33:41 24 smoke. And I think my contention was that the papers in  
 11:33:45 25 that area to date have used very high levels, and we  
 11:33:50 26 should reassess the issue with more reasonable levels of  
 11:33:55 27 environmental tobacco smoke. I submitted it as a normal  
 11:34:00 28 grant proposal, and it was refused -- it was rejected.  
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 11:34:03 1 Q What did Mr. Cafferty tell you about the  
 11:34:06 2 Sharon Boyse memo related to the global strategy?  
 11:34:08 3 A Exactly -- oh. I didn't say something that  
 11:34:12 4 she said. In a memo, she stated we should keep the ETS  
 11:34:19 5 issue alive or active, something to that extent, is all I  
 11:34:23 6 know about it.  
 11:34:24 7 Q And what was your reaction to that?  
 11:34:28 8 A I had no reaction. It was sort of out of  
 11:34:31 9 context, and it really didn't make much of an impression.

11:34:38 10 I would say that Sharon Boyse is a very easy person to  
 11:34:45 11 deal with. She's been always very cognizant of my  
 11:34:49 12 objectivity toward the issue, and in many times, she has  
 11:34:55 13 been very protective of my involvement, the few times  
 11:35:00 14 we've worked together. So I -- the particular comment  
 11:35:05 15 made no impact on me, but my dealings with her indicated  
 11:35:09 16 she's been easy to deal with.

11:35:11 17 Q In this memo, the Sharon Boyse global  
 11:35:27 18 strategy memo, she writes the Philip Morris philosophy of  
 11:35:33 19 ETS was presented. This appeared to revolve around the  
 11:35:38 20 selection in all possible countries of a group of  
 11:35:41 21 scientists either to critically review the scientific  
 11:35:43 22 literature on ETS to maintain controversy or to carry out  
 11:35:47 23 research on ETS. Just accept that that's a quote out of  
 11:35:55 24 her memo.

11:35:56 25 Do you agree that that describes your role  
 11:36:00 26 for the tobacco industry since 1986 when you first got  
 11:36:04 27 involved in the subject of ETS?

11:36:05 28 A Would you repeat that again.

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11:36:08 1 MR. STONE: Let's have it repeated, and then  
 11:36:11 2 I'll make my objections.  
 11:36:12 3 BY MR. HULBURT:

11:36:12 4 Q The Philip Morris philosophy of ETS was  
 11:36:15 5 presented. This appeared to revolve around the selection  
 11:36:18 6 in all possible countries of a group of scientists either  
 11:36:20 7 to critically review the scientific literature on ETS to  
 11:36:23 8 maintain controversy or to carry out research on ETS.

11:36:27 9 MR. STONE: Objection; compound, lacks  
 11:36:30 10 foundation, inappropriate use a document which is  
 11:36:34 11 otherwise inadmissible. The document speaks for itself,  
 11:36:38 12 calls for speculation.

11:36:39 13 You may answer.

11:36:40 14 THE WITNESS: I never thought of the  
 11:36:43 15 issue -- my involvement in that way at all. My  
 11:36:45 16 involvement has been requesting my services, my expertise  
 11:36:53 17 to examine a body of literature and offer my objective  
 11:36:57 18 opinion based on the observations for which I was  
 11:37:01 19 remunerated. And I never thought of doing anything to  
 11:37:07 20 serve an agenda. I never viewed it in that way.

11:37:10 21 BY MR. HULBURT:

11:37:10 22 Q Has it been your role to maintain the  
 11:37:15 23 controversy -- the appearance of a controversy on the  
 11:37:18 24 subject of ETS?

11:37:19 25 MR. STONE: Objection; vague and ambiguous.  
 11:37:21 26 I'm sorry. Vague and ambiguous. Argumentative, lacks  
 11:37:23 27 foundation, calls for speculation, assumes facts not in  
 11:37:27 28 evidence.

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11:37:28 1 You may answer.

11:37:29 2 THE WITNESS: I would be personally offended  
 11:37:31 3 if I thought I was a tool in some agenda. And I don't  
 11:37:36 4 really view myself that way at all.

11:37:40 5 BY MR. HULBURT:

11:37:40 6 Q Do you agree that the lawyers at Covington &  
 11:37:57 7 Burling have been the intermediaries between you and the  
 11:38:03 8 tobacco industry?

11:38:04 9 MR. STONE: Objection; vague and ambiguous,  
 11:38:06 10 overbroad, and compound. Lacks foundation.

11:38:10 11 MR. LENDRUM: Join in the objections.

11:38:12 12 MR. STONE: You can answer.

11:38:18 13 THE WITNESS: Okay. I was waiting.

11:38:19 14 To the best of my knowledge, in many

11:38:22 15 situations, they have been the people that we have  
 11:38:25 16 interacted with.  
 11:38:26 17 BY MR. HULBURT:  
 11:38:26 18 Q This Sharon Boyse memo also says David -- I  
 11:38:32 19 don't know if it's Remes or Remes, presented the approach  
 11:38:37 20 of the U.S. lawyers and said he believed their function to  
 11:38:40 21 be to act as intermediaries between the consultants and  
 11:38:44 22 industry and also to indicate, quote, areas of  
 11:38:46 23 sensitivity, end quote, on ETS research.  
 11:38:49 24 Has that been your experience?  
 11:38:51 25 MR. STONE: Objection; lacks foundation. He  
 11:38:53 26 doesn't know Mr. Remes, calls for speculation, is an  
 11:38:57 27 inappropriate use of an inadmissible document. The  
 11:39:00 28 question is improper as to form. It's overbroad and  
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 11:39:03 1 compound.  
 11:39:04 2 THE WITNESS: I have no opinion on that.  
 11:39:05 3 BY MR. HULBURT:  
 11:39:05 4 Q Have you had discussions with any lawyers  
 11:39:09 5 related to the tobacco industry related to areas of  
 11:39:12 6 sensitivity on ETS research?  
 11:39:16 7 A Just in terms of what's the threshold of an  
 11:39:19 8 effect, perhaps, from a scientific standpoint. We've  
 11:39:22 9 never really discussed politics or agenda. So in that  
 11:39:29 10 regard, that's the extent. Not really sensitivity as  
 11:39:32 11 stated in your document.  
 11:39:34 12 Q The memo goes on. It says he noted that in  
 11:39:37 13 the USA, their strategy at first had been to meet  
 11:39:41 14 short-term, quote, emergencies, end quote, by presenting  
 11:39:46 15 teams of witnesses, e.g., Witorsch, Gray Robertson,  
 11:39:51 16 period. He did, however, acknowledge that this kind of  
 11:39:54 17 road show would be -- unlikely to be acceptable in Europe.  
 11:39:58 18 Who is Gray Robertson? Is that two people,  
 11:40:03 19 or one person?  
 11:40:04 20 MR. STONE: I'm going to object. The  
 11:40:06 21 question is improper to form, inappropriately quotes from  
 11:40:09 22 a document which is not admissible and which this witness  
 11:40:12 23 has no foundation to testify with respect to. Move to  
 11:40:15 24 strike the efforts to quote from the document.  
 11:40:18 25 But you may answer the question as to  
 11:40:21 26 whether -- who is Gray Robertson, is that one person or  
 11:40:24 27 two people?  
 11:40:25 28 THE WITNESS: One person, as I understand  
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 11:40:27 1 it.  
 11:40:27 2 BY MR. HULBURT:  
 11:40:29 3 Q Do you know Gray Robertson?  
 11:40:32 4 A I knew him at one point. I had met him on  
 11:40:35 5 previous occasions, and he was an engineer who specialized  
 11:40:40 6 in indoor air quality.  
 11:40:41 7 Q Have you done any work with Gray Robertson?  
 11:40:44 8 A Not specifically, no.  
 11:40:45 9 Q How about generally?  
 11:40:46 10 A Not generally. I'm sure I've met -- I mean,  
 11:40:51 11 I know I've met him at meetings, and I've seen him. But I  
 11:40:55 12 don't remember where or when.  
 11:40:56 13 Q Have you ever been part of what is apparently  
 11:41:02 14 euphemistically called a road show for the tobacco  
 11:41:05 15 industry with Gray Robertson?  
 11:41:07 16 A I've heard that term. No, I have not.  
 11:41:09 17 Q You've heard that term?  
 11:41:10 18 A I've heard that term from time to time.  
 11:41:12 19 Well, road show of presentations, of scientific



11:41:18 20 presentations on the issue.

11:41:21 21 Q Has it been your understanding that your role

11:41:23 22 for the tobacco industry is to be part of the road show to

11:41:26 23 respond to emergencies on the ETS issue?

11:41:29 24 A Well, no. I was not involved in that. I

11:41:32 25 remember that particular time when they were giving out

11:41:36 26 presentations. It was my understanding that the purpose

11:41:38 27 behind that was to clear up any misunderstandings on the

11:41:42 28 issue of ETS. Not to portray a misleading picture.

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11:41:49 1 And I can assure you from the standpoint of

11:41:52 2 my brother, that being a board certified pulmonologist and

11:41:58 3 a man with a longstanding academic credit, that that's not

11:42:01 4 his goal, to convey misinformation, and a practicing

11:42:05 5 physician. It's to set the record straight.

11:42:07 6 Q Was it his goal to perpetuate the controversy?

11:42:10 7 A No, I don't believe so. I believe he has the

11:42:16 8 same perception of the issue and standards that I do. And

11:42:20 9 that is nonadvocative, offering a professional opinion.

11:42:25 10 Q Do you agree that the level of involvement of

11:42:38 11 the lawyers, as described in the quotes that I've read to

11:42:41 12 you, raises questions about the objectivity of the work?

11:42:44 13 MR. STONE: Objection; lacks foundation,

11:42:47 14 calls for speculation, vague and ambiguous, overbroad.

11:42:51 15 If you can answer the question, if you know

11:42:54 16 what he's referring to, about the objectivity of the work,

11:42:57 17 whose work he's referring to and so on, you can try to

11:43:01 18 answer.

11:43:01 19 THE WITNESS: I've never thought about that

11:43:03 20 particular aspect of the issue. My view is that there are

11:43:06 21 a lot of related aspects to that issue pertaining to

11:43:10 22 regulations and government and potential suits. And

11:43:15 23 somebody with legal expertise has to be the intermediary.

11:43:19 24 My goal was to give my best scientific judgment.

11:43:22 25 BY MR. HULBURT:

11:43:23 26 Q Have you ever had any concerns about the

11:43:30 27 level of your involvement with tobacco industry lawyers as

11:43:34 28 whether that affects the perception of your objectivity as

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11:43:39 1 a scientist?

11:43:40 2 A The only time I might -- it might -- not so

11:43:49 3 much -- the issue sometimes took its emotional toll,

11:43:53 4 because you would read in the paper how the perception of

11:43:56 5 the tobacco industry as being in a negative sense. And,

11:44:00 6 naturally, as a human being, you would sometimes be a

11:44:03 7 little -- have hurtful feelings about being associated

11:44:06 8 with somebody that is ascribed in a negative tone. And

11:44:10 9 that has been momentary, because in the final analysis,

11:44:15 10 I've felt very comfortable with my situation because of

11:44:19 11 the type of work I've done and the issue that I've been

11:44:23 12 involved in.

11:44:23 13 Q Are there any -- strike that.

11:44:34 14 Is there a scientist -- tobacco industry

11:44:42 15 scientist who was the most frequent contact between the

11:44:45 16 tobacco industry and your brother's organization, to your

11:44:49 17 knowledge?

11:44:49 18 A I don't know.

11:44:50 19 Q When an assignment comes to CEHHT, does it

11:44:56 20 typically come from a scientist, or from a lawyer?

11:44:58 21 A I can't answer that.

11:45:00 22 Q Ms. Boyse's memo has a paragraph that reads

11:45:45 23 Philip Morris expects the group of scientists to operate

11:45:48 24 within the confines of decisions taken by PM scientists to

11:45:53 25 determine the general direction of research which  
11:45:55 26 apparently would then be filtered, quote-unquote, filtered  
11:45:59 27 by lawyers to eliminate areas of sensitivity.  
11:46:03 28 Has any of that been your experience in  
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11:46:06 1 dealing with the tobacco industry?  
11:46:07 2 A Not in --  
11:46:08 3 MR. STONE: You've got to let me object, if  
11:46:10 4 you would.  
11:46:11 5 Move to strike the answer for purposes of  
11:46:12 6 interposing the objection. Object to the question as it's  
11:46:15 7 improper as to form in that it purports to quote from a  
11:46:18 8 document that is otherwise inadmissible. I further object  
11:46:21 9 to the question on the grounds that it lacks foundation,  
11:46:24 10 is overbroad, is compound, and is vague and ambiguous.  
11:46:28 11 Sorry to interrupt you, Dr. Witorsch. You  
11:46:31 12 can now answer the question.  
11:46:32 13 THE WITNESS: Could you repeat the question,  
11:46:34 14 please.  
11:46:34 15 BY MR. HULBURT:  
11:46:34 16 Q Yeah. I'll read the quote to you again. The  
11:46:37 17 question is whether this has been any part of your  
11:46:39 18 experience in dealing with the tobacco industry.  
11:46:40 19 It says, Philip Morris then expects the group  
11:46:44 20 of scientists to operate within the confines of decisions  
11:46:47 21 taken by PM scientists to determine the general direction  
11:46:51 22 of research, which apparently would then be, quote,  
11:46:55 23 filtered, end quote, by lawyers to eliminate areas of  
11:46:58 24 sensitivity.  
11:47:00 25 MR. STONE: Same objections.  
11:47:00 26 THE WITNESS: I have never had that  
11:47:02 27 experience, and the only way I could comment is that if  
11:47:06 28 active smoking and its adverse health effects is a  
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11:47:09 1 sensitive area, as I would expect it to have been in the  
11:47:13 2 past, no one has ever said, well, you can't mention active  
11:47:17 3 smoking in your explanation. And I believe it's  
11:47:20 4 Dr. Boyse, not Ms. Boyse. She's a Ph.D.  
11:47:24 5 BY MR. HULBURT:  
11:47:24 6 Q Does this sentence I just quoted to you  
11:47:28 7 trouble you as a scientist?  
11:47:30 8 MR. STONE: Objection; lacks foundation,  
11:47:32 9 calls for speculation, vague and ambiguous. Same  
11:47:35 10 objections previously asserted.  
11:47:38 11 THE WITNESS: And I --  
11:47:39 12 MR. STONE: You can answer.  
11:47:40 13 THE WITNESS: I can answer.  
11:47:41 14 The question troubles me, but it would  
11:47:46 15 trouble me more if it was put into practice on my behalf.  
11:47:50 16 BY MR. HULBURT:  
11:47:50 17 Q Do you know whether it's put into practice --  
11:47:52 18 A No.  
11:47:52 19 Q -- elsewhere?  
11:47:54 20 Do you have any information about whether  
11:47:59 21 there are any scientists who are practicing under this  
11:48:04 22 scheme as described here in this sentence that I quoted to  
11:48:08 23 you?  
11:48:08 24 MR. STONE: Same objections.  
11:48:10 25 THE WITNESS: No information.  
11:48:10 26 BY MR. HULBURT:  
11:48:10 27 Q Have you ever provided any names of  
11:48:14 28 scientists to any representatives of the tobacco industry,  
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11:48:16 1 scientists who may be willing to get involved in  
11:48:20 2 tobacco-related research?  
11:48:21 3 A Not to my recollection.  
11:48:23 4 Q Have you ever been asked to recommend any  
11:48:25 5 scientists other than you who may be willing to get  
11:48:30 6 involved in tobacco-related research?  
11:48:33 7 A No.  
11:48:33 8 Q Have you dealt with any European scientists  
11:48:43 9 on the subject of ETS?  
11:48:45 10 A I have met the European scientists through  
11:48:50 11 the years. I can't recall specifically who, but I have  
11:48:52 12 met some.  
11:48:53 13 Q At what types of functions?  
11:48:59 14 A Conferences of the kind that we -- I  
11:49:07 15 described earlier. The one in Latin America. We also had  
11:49:11 16 a similar conference in that regard in Mauritius, off the  
11:49:18 17 coast of Africa. And I did meet at one of these meetings  
11:49:22 18 a professor of neuroscience. I forget his name. But I  
11:49:29 19 have met people through the years.  
11:49:31 20 Q Has -- have you ever had an assignment that  
11:49:40 21 you understood to be assisting any foreign non-American  
11:49:46 22 scientists in understanding ETS issues?  
11:49:54 23 A Not that I recall. I can't say with  
11:49:58 24 certainty. As a matter of fact, let me clarify that.  
11:50:10 25 And, again, the name of the individual, I cannot  
11:50:18 26 specifically recall. But I met in Hong Kong several years  
11:50:23 27 ago with a scientist, a toxicologist, who was in the  
11:50:33 28 employ of Philip Morris. And I forget the gentleman's  
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11:50:38 1 name. And we met with a legislator for -- from Pakistan  
11:50:45 2 to talk about the ETS issue. And I explained the ETS  
11:50:50 3 issue, as I understood it, to him. He was involved in  
11:50:54 4 some sort of legal issue in Pakistan that may have been  
11:51:00 5 related to ETS. But I was there to talk about the same  
11:51:04 6 stuff I usually talk about: the health effects of ETS.  
11:51:09 7 Q Have you had similar meetings with  
11:51:11 8 legislators from other countries besides Pakistan?  
11:51:17 9 A Not to my recollection.  
11:51:31 10 MR. STONE: And the words you're using is  
11:51:34 11 legislators, t-o-r-s, as an individual?  
11:51:38 12 THE WITNESS: Yes. Legislators. I think he  
11:51:41 13 was a Pakistan senator.  
11:51:44 14 BY MR. HULBURT:  
11:51:46 15 Q All right. Dr. Boyse also describes in her  
11:51:48 16 memo, quote, their idea -- referring back to Philip  
11:51:51 17 Morris, their idea is that the groups of scientists should  
11:51:54 18 be able to produce research or stimulate controversy in  
11:51:58 19 such a way that public affairs people in the relevant  
11:52:00 20 countries would be able to make use of or market the  
11:52:03 21 information. The scientists would not necessarily be  
11:52:06 22 expected to act as spokesmen for the industry but could be  
11:52:12 23 if they were prepared to do so.  
11:52:13 24 Is that consistent for the work you've done  
11:52:17 25 for the tobacco industry?  
11:52:18 26 MR. STONE: Objection; improper use of a  
11:52:20 27 document that's otherwise inadmissible, lacks foundation,  
11:52:23 28 calls for speculation, is overbroad, compound, and vague  
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11:52:26 1 and ambiguous.  
11:52:26 2 You can try to answer as to the best of your  
11:52:30 3 understanding.  
11:52:31 4 THE WITNESS: I don't view that for my  
11:52:33 5 purpose. I'm very comfortable with my position because I

11:52:34 6 think the scientific position that I've taken and my  
11:52:37 7 interpretation is entirely valid. As a matter of fact, I  
11:52:41 8 think some people who tend to overinterpret the data tend  
11:52:47 9 to distort the issue. And I feel comfortable, because I  
11:52:51 10 feel I'm bringing them back to a balanced perspective.  
11:52:55 11 BY MR. HULBURT:

11:52:55 12 Q You're aware, of course, that your work has  
11:52:58 13 been used by public affairs people in the tobacco industry  
11:53:03 14 to perpetuate the controversy related to ETS?

11:53:07 15 MR. STONE: Objection; argumentative, vague  
11:53:08 16 and ambiguous with respect to the use of the phrase  
11:53:10 17 "perpetuate the controversy," lacks foundation in that  
11:53:14 18 regard.

11:53:15 19 You can answer.

11:53:17 20 THE WITNESS: I would assume, now that you  
11:53:19 21 bring it up, because I really never thought about it much,  
11:53:22 22 that they would use their particular -- our findings to  
11:53:26 23 state their position. Yes. I've never thought about it  
11:53:32 24 much before, but, yes.

11:53:33 25 BY MR. HULBURT:

11:53:33 26 Q Have you ever assisted in preparing any  
11:53:37 27 public statements? By that, I mean not scientific papers,  
11:53:42 28 but papers that will be used for public statements  
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11:53:44 1 regarding ETS.

11:53:46 2 A I have no expertise in marketing or public  
11:53:52 3 affairs. So I can't imagine that I've ever done that. I  
11:53:55 4 have no recollection.

11:53:55 5 Q Have you ever consulted with any tobacco  
11:53:57 6 companies or representatives of the tobacco industry with  
11:53:59 7 respect to the scientific content of any of their web  
11:54:03 8 pages?

11:54:04 9 A No. That I can recall, no.

11:54:23 10 Q Have you had any dealings with John Rupp at  
11:54:28 11 Covington & Burling?

11:54:29 12 A Yes.

11:54:29 13 Q In what regard?

11:54:30 14 A Well, he has been an attorney that, through  
11:54:34 15 the years, has been very much involved in the ETS issue.  
11:54:41 16 And earlier on, we saw a considerable amount of him in  
11:54:46 17 terms of interaction.

11:54:48 18 Q Early on, meaning?

11:54:49 19 A Well, the late eighties, early nineties. I  
11:54:53 20 haven't seen much of him in recent years. I believe he's  
11:54:57 21 posted outside of the U.S.

11:54:59 22 Q Have you ever participated in any training  
11:55:06 23 sessions, training for media contacts or testifying  
11:55:13 24 related to tobacco issues?

11:55:16 25 A Yes. I have had -- I've been given a couple  
11:55:21 26 of -- no. One, as a matter of fact. The other one was on  
11:55:24 27 another issue. But I have been given a so-called media  
11:55:31 28 training experience, how to answer questions and appear in  
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11:55:37 1 front of a television. I don't know if I'm doing it  
11:55:39 2 today, but I was given some of the fundamentals.

11:55:43 3 Q When was that?

11:55:43 4 A I was at a meeting in Australia in 1994. I  
11:55:49 5 presented a paper on our work, on ETS, and I was -- I was  
11:55:57 6 told that I might be contacted by attorneys and would I --  
11:56:03 7 I mean, by reporters and would I have any objection to  
11:56:07 8 being interviewed. And I said no. I mean, I can -- I can  
11:56:13 9 convey what I think. And would I like to have some media  
11:56:17 10 training.

11:56:17 11 And I remember we were at Surfers Paradise on  
 11:56:21 12 The Gold Coast. And we went to a video training studio  
 11:56:26 13 for an afternoon in Brisbane. And I was shown how to  
 11:56:29 14 answer a question and not to squirm and bounce my chair,  
 11:56:33 15 all the things I'm doing today, I was told not to.

11:56:36 16 Q Who -- or what conference was that?  
 11:56:39 17 A I don't recall. It was an indoor air  
 11:56:42 18 scientific conference, and I presented my work at a poster  
 11:56:47 19 session.

11:56:47 20 Q And who provided the training?  
 11:56:49 21 A Well, it was a -- some video studio. Some --

11:56:54 22 Q Who paid for it?  
 11:56:56 23 A It was -- I assume British American Tobacco  
 11:57:00 24 who invited us over.

11:57:02 25 Q And were you interviewed by the press?  
 11:57:05 26 A I think I had one radio interview.

11:57:11 27 Q Other than that, have you been interviewed  
 11:57:13 28 for the public media on issues related to ETS?  
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11:57:17 1 A From -- did you want --  
 11:57:19 2 MR. STONE: No.  
 11:57:21 3 THE WITNESS: From time to time, I've had an  
 11:57:23 4 interview. Primarily, overseas.  
 11:57:27 5 BY MR. HULBURT:

11:57:27 6 Q Can you -- can you list for me some of them,  
 11:57:30 7 by publication or date or issue?  
 11:57:32 8 A I can try to recall that I actually had an  
 11:57:40 9 interview -- at least one interview in Latin America. I  
 11:57:45 10 think it was in Santiago Chili after a conference. It was  
 11:57:49 11 a video interview.

11:57:51 12 Q When was that?  
 11:57:51 13 A That was like 1996. The summer of 1996. To  
 11:57:55 14 tell you the truth, what transpired, I don't know, because  
 11:57:58 15 I spoke English, and everything was being translated.

11:58:01 16 Q Did it end up on TV?  
 11:58:03 17 A I think so.  
 11:58:03 18 I think I was also interviewed for a magazine  
 11:58:07 19 article, which I never saw, in a Santiago -- in a Chilean  
 11:58:13 20 magazine. I think I also had another interview in Bogata  
 11:58:19 21 at that time.

11:58:19 22 Q All that is in '96?  
 11:58:20 23 A '96.

11:58:21 24 Q Related to what issue?  
 11:58:22 25 A That was the trip that we made to the four  
 11:58:25 26 Latin American locations when I gave presentations.

11:58:28 27 Q So you were talking about ETS and children?  
 11:58:30 28 A ETS and respiratory health effects in  
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11:58:33 1 children.  
 11:58:33 2 Q Okay.  
 11:58:34 3 A It may have been more extensive, as a matter  
 11:58:36 4 of fact. I may have talked about health effects in  
 11:58:38 5 general.

11:58:38 6 Q Okay. What else? Any other media interviews?  
 11:58:43 7 A There probably were, but my memory escapes me  
 11:58:47 8 right now.

11:58:48 9 Q How about in America?  
 11:58:49 10 A Never in America, no.

11:58:52 11 Q So you've never had a media interview in  
 11:58:55 12 America --  
 11:58:55 13 A No.  
 11:58:55 14 Q -- related to ETS?  
 11:58:57 15 A No.

11:58:57 16 Q Okay.

11:58:58 17 A I want to add one other thing, which I

11:59:00 18 recollect. I did do -- when you mentioned John Rupp. At

11:59:05 19 one time, John Rupp had asked me to do some work on a

11:59:10 20 document, and I don't even remember the specifics of the

11:59:13 21 document.

11:59:13 22 But it was some background work on the

11:59:17 23 science of ETS and respiratory health effects. I don't

11:59:20 24 even remember whether it was with children or adults, but

11:59:23 25 it was related to some international Philip Morris-related

11:59:29 26 activity. So it was looking at material. It was offering

11:59:33 27 my opinion of whether it was accurate. It was rather --

11:59:38 28 it seemed more like a scientific document than a public

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11:59:42 1 relations document.

11:59:43 2 So it was perhaps some sort of position

11:59:47 3 paper. I looked at it, and I gave a critique of that

11:59:51 4 particular writeup. And I sent it back. Just evaluating

11:59:56 5 the science from the standpoint of accuracy and

12:00:04 6 readability.

12:00:05 7 Q So the paper that you were reviewing was

12:00:09 8 what? It's from what source or --

12:00:10 9 A I don't remember. But I believe -- I believe

12:00:13 10 it was John Rupp from Europe had sent it. There was some

12:00:17 11 activity that they were working on on behalf of Philip

12:00:20 12 Morris International.

12:00:22 13 I would add that that type of activity, with

12:00:25 14 the exclusion of the fact that we bill out for our time,

12:00:28 15 is something I do for colleagues on a regular basis in

12:00:32 16 terms of critiquing documents of scientific work. And

12:00:39 17 it's something I do as an academic, because I sit on the

12:00:42 18 editorial board of several journals. So it was the same

12:00:46 19 type of activity I think that I usually would do. And I

12:00:50 20 was looking at it not from the standpoint of impact, but

12:00:55 21 more from the standpoint of scientific credibility and

12:00:58 22 accuracy.

12:00:59 23 Q Do you know what the Health Policy Center is

12:01:21 24 in Bethesda, Maryland. Dr. Gori has got a paper here

12:01:25 25 through the Health Policy Center.

12:01:28 26 A I believe that's the official name of Gio

12:01:32 27 Gori's consulting activities, consulting business.

12:01:35 28 Q Let me show you this document. I don't know

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12:01:59 1 if we're going to make it an exhibit or not. We'll see

12:02:03 2 where it goes. But this is numbered 2015018639 through

12:02:10 3 8697 It's apparently published by The Tobacco Institute

12:02:15 4 entitled "Tobacco Smoke and the Nonsmoker: Scientific

12:02:20 5 Integrity at The Crossroads."

12:02:23 6 The first question is have you seen that

12:02:25 7 before? The second question is going to be do you know

12:02:27 8 when it's published?

12:02:28 9 A I haven't seen this before. From the title,

12:02:31 10 I haven't.

12:02:32 11 A lot of this material, just from my

12:03:23 12 experience, is familiar to me. I know about these things,

12:03:27 13 yes, in terms of the Hiroyama study. Some of these

12:03:33 14 arguments are --

12:03:57 15 Q Are you critical of the Hiroyama study?

12:04:00 16 A Well, if I were critical of it, it would be

12:04:04 17 on very soft ground, because it's been so long since I've

12:04:10 18 had a chance to even look at it. But I recall there were

12:04:13 19 a lot of concerns about that particular study. But I

12:04:17 20 really couldn't quote this. I really couldn't quote the

12:04:29 21 Hiroyama study with any degree of authority.  
12:04:32 22 But my understanding was it was a relatively  
12:04:35 23 weak study from the epidemiology -- epidemiologic  
12:04:39 24 standpoint. Somewhere in the past, I may have read  
12:04:41 25 it. But it's been a long, long time.  
12:04:43 26 Q Did you ever have any conversations with  
12:04:45 27 tobacco scientists who believed it was a good study and  
12:04:48 28 probably had an accurate conclusion?  
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12:04:51 1 MR. STONE: Objection; compound.  
12:04:53 2 THE WITNESS: I haven't had much discussion  
12:04:54 3 with tobacco scientists on the issue.  
12:04:56 4 BY MR. HULBURT:  
12:04:56 5 Q So is that a "yes," or a "no"?  
12:05:02 6 MR. STONE: Same objection.  
12:05:03 7 THE WITNESS: Not to my -- not to my  
12:05:04 8 recollection. I've read a lot about it through the  
12:05:11 9 years. I've -- I don't recall working on this particular  
12:05:16 10 document. Although, looking at it, it looks very much  
12:05:21 11 like the type of stuff that my brother and I have worked  
12:05:24 12 on. It's conceivable that we were asked to either edit it  
12:05:33 13 or perhaps work on it through the years. But that's only  
12:05:44 14 an impression of looking at it from the standpoint of what  
12:05:49 15 is sort of being said and the writing style.  
12:05:55 16 It might have been -- there might have been  
12:06:01 17 some activity. And, again, I'm saying this to give you  
12:06:04 18 the benefit of the doubt, rather than me excluding  
12:06:07 19 it. But it would be put in this way, I'm sure: Would you  
12:06:12 20 be willing to write a piece on something or other, your  
12:06:16 21 impression of ETS and asthma, for example, a document, for  
12:06:23 22 us. And I would do it. We would do it if it was a good,  
12:06:27 23 honest work and we weren't in any way compromising. And I  
12:06:32 24 don't have a problem with that at all.  
12:06:33 25 BY MR. HULBURT:  
12:06:33 26 Q So have you prepared papers like this? By  
12:06:36 27 that, I mean sort of a position paper or a white paper  
12:06:40 28 sort of format like this?  
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12:06:41 1 A Well, I wouldn't say it would be a position,  
12:06:43 2 because it would be nonadvocative. It could be used in an  
12:06:48 3 advocative sense, but it would be our best view of what  
12:06:52 4 our objective, critical view of what the status of science.  
12:06:55 5 MR. STONE: Could we mark a copy as an  
12:06:58 6 exhibit so that the witness will have it available when he  
12:07:00 7 reviews the transcript since there were questions asked  
12:07:03 8 about it and he referred to it?  
12:07:05 9 MR. HULBURT: We'll have to do that later. I  
12:07:07 10 mean, we can. My copy's got some highlights in it that I  
12:07:11 11 don't want to be the one that goes to the exhibit. We can  
12:07:13 12 call this Exhibit 5193, and then we --  
12:07:19 13 MR. STONE: Why shouldn't the witness have  
12:07:19 14 attached as an exhibit the one you showed him? I mean, if  
12:07:22 15 your highlights were something that he noticed in the  
12:07:24 16 course of reviewing it and responding to your questions,  
12:07:25 17 shouldn't that be marked as an exhibit the way you showed  
12:07:28 18 it to him?  
12:07:28 19 MR. HULBURT: No.  
12:07:29 20 MR. STONE: Why not?  
12:07:29 21 MR. HULBURT: Because that's my work product  
12:07:31 22 and it's got nothing to do with the questions that I asked  
12:07:31 23 him.  
12:07:31 24 MR. STONE: There's no work product that  
12:07:33 25 applies once you've shown it to a third party.

12:07:35 26 MR. HULBURT: It had nothing to do with the  
12:07:37 27 questions I asked him.  
12:07:38 28 What's the point of doing that?  
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12:07:39 1 MR. STONE: That's what you showed him. You  
12:07:41 2 asked him, look at the document. You had some questions  
12:07:43 3 about it. I don't know what you highlighted or not. I  
12:07:45 4 don't know whether the highlighting caused him to answer  
12:07:47 5 as to a particular subject. Suppose the -- is it  
12:07:50 6 Hiroyama?  
12:07:51 7 THE WITNESS: Hiroyama.  
12:07:53 8 MR. STONE: Suppose the Hiroyama article was  
12:07:54 9 highlighted and caused his attention to focus on it  
12:07:58 10 because you highlighted it.  
12:07:59 11 MR. HULBURT: Well, it's not.  
12:08:00 12 (Exhibit 5193 was marked for identification.)  
12:08:00 13 BY MR. HULBURT:  
12:08:00 14 Q I have several pages that I have some  
12:08:02 15 underlining in this document. You saw one of them as you  
12:08:07 16 flipped through it.  
12:08:07 17 Did that cause you to -- did it affect your  
12:08:09 18 answers in any way to the questions I asked you about this  
12:08:13 19 document?  
12:08:13 20 A I don't know -- I couldn't say for  
12:08:14 21 certainty. In fact, I couldn't even look at the detail.  
12:08:18 22 I'm just saying looking at the writing, the way it's  
12:08:22 23 written, and the issues addressed, I could have or Phil  
12:08:27 24 and I could have together provided that document or it  
12:08:31 25 could have been extracted from our writings. It's the  
12:08:34 26 same type of material. But I have -- I couldn't say for  
12:08:38 27 certainty whether I did that for tobacco -- The Tobacco  
12:08:42 28 Institute.  
Vail, Christians & Associates (619)544-8344 101  
12:08:42 1 Q Right.  
12:08:44 2 And my highlighting had nothing to do with  
12:08:46 3 that, right?  
12:08:47 4 MR. STONE: Whether he did something for The  
12:08:48 5 Tobacco Institute?  
12:08:49 6 THE WITNESS: I couldn't say for certainty.  
12:08:50 7 BY MR. HULBURT:  
12:08:50 8 Q It -- it says here on page 51 --  
12:09:00 9 MR. STONE: Well, if you're going to read  
12:09:02 10 from the document, I want a copy. I want a chance to  
12:09:05 11 review it.  
12:09:06 12 MR. HULBURT: Well, I don't have another  
12:09:07 13 copy.  
12:09:08 14 MR. STONE: Then let's take a break and make  
12:09:10 15 one. You and Mr. McGuire have this tendency to show up at  
12:09:13 16 depositions with no copies of exhibits for anybody.  
12:09:16 17 MR. HULBURT: Well, you have a tendency to  
12:09:18 18 show up at deposition with documents that we've never seen  
12:09:23 19 before.  
12:09:23 20 MR. STONE: Because I'm producing them.  
12:09:24 21 MR. HULBURT: Sometimes it's not perfect.  
12:09:26 22 Sometimes you produce copies, and sometimes we don't.  
12:09:30 23 MR. STONE: Let's take a break and make a  
12:09:31 24 copy of it.  
12:09:32 25 MR. HULBURT: Why don't you just let me ask  
12:09:34 26 this question.  
12:09:34 27 MR. STONE: No. Because I want to see the  
12:09:36 28 document before you start asking questions about it. You  
Vail, Christians & Associates (619)544-8344 102  
12:09:38 1 can defer it until later if you want and make a copy over



12:09:41 2 the noon break. That's fine with me. I'm not going to  
12:09:45 3 make you put your question to him now, but I want a chance  
12:09:48 4 to review the document.  
12:09:49 5 BY MR. HULBURT:  
12:09:49 6 Q Let me ask you this question: Is it your  
12:09:54 7 opinion that exposure to ETS has not been shown to impair  
12:09:59 8 the respiratory health of nonsmoking adults or children?  
12:10:05 9 MR. STONE: This goes -- the question is  
12:10:07 10 compound, as phrased, and it goes beyond the areas on  
12:10:10 11 which this witness has been designated to testify as an  
12:10:13 12 expert.  
12:10:13 13 If you have the question in mind, you can  
12:10:16 14 answer it.  
12:10:16 15 THE WITNESS: Could you repeat that phrase.  
12:10:18 16 BY MR. HULBURT:  
12:10:18 17 Q Yeah.  
12:10:19 18 Is it your opinion that exposure to ETS has  
12:10:21 19 not been shown to impair the respiratory health of  
12:10:25 20 nonsmoking children?  
12:10:28 21 MR. STONE: Same objections.  
12:10:31 22 THE WITNESS: And I can answer the  
12:10:34 23 question?  
12:10:36 24 MR. STONE: You can answer. I'm sorry.  
12:10:37 25 THE WITNESS: Has not been shown is very  
12:10:39 26 critical, I think. I can live with that comment, with  
12:10:42 27 that has not been shown.  
12:10:43 28 BY MR. HULBURT:  
Vail, Christians & Associates (619)544-8344 103  
12:10:43 1 Q What does that mean to you, scientifically,  
12:10:46 2 the statement has not been shown? Is there some sort of  
12:10:49 3 scientific certainty that goes with that thought?  
12:10:51 4 A With that, there is scientific certainty.  
12:10:54 5 There's an element of uncertainty. But that comment means  
12:10:56 6 it's pretty close to the really uncertain aspect of that  
12:11:00 7 spectrum. The -- that comment implies that it hasn't  
12:11:08 8 satisfied any of the criteria of causality.  
12:11:11 9 And I can say it with a degree of confidence,  
12:11:15 10 A, in terms of older children, the data are not  
12:11:18 11 consistent; B, in terms of preschool children, there are  
12:11:23 12 alternate suitable explanations; C, in terms of other  
12:11:34 13 aspects of it with regard to causality, the strength of  
12:11:38 14 the association is relatively weak. Even in the preschool  
12:11:43 15 children studies, the risk ratios, the relative risks are  
12:11:48 16 usually well below two, which indicates they are weak  
12:11:54 17 risks.  
12:11:55 18 There are so many issues that have not been  
12:11:57 19 addressed with regard to that particular body of  
12:12:00 20 knowledge, that I -- I think there's a lot of  
12:12:03 21 deficiencies.  
12:12:04 22 And, furthermore, the -- from the causality  
12:12:11 23 standpoint with regard to the preschool children, there  
12:12:14 24 are alternate explanations which I've addressed earlier in  
12:12:18 25 my testimony.  
12:12:19 26 Q What degree of certainty does there need to  
12:12:22 27 be in a scientific conclusion in order for you to conclude  
12:12:27 28 that the connection has been shown?  
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12:12:28 1 A Well, I think what really should be shown in  
12:12:31 2 terms of these types of studies is that you have a  
12:12:35 3 relative risk that is reasonably robust that would be at  
12:12:43 4 least two, somewhat higher. It would be one that is  
12:12:48 5 reproducible in terms of showing it, a vast majority of  
12:12:54 6 the attempts, rather than in one third or one quarter of

12:12:58 7 the attempts, which is more often the case in the  
12:13:02 8 school-aged children.

12:13:03 9 And you can say with some degree of certainty  
12:13:06 10 that the mechanism that explains this association is  
12:13:10 11 attributable to your interpretation.

12:13:13 12 And as far as I'm concerned with preschool or  
12:13:17 13 school-aged children, the issue of environmental tobacco  
12:13:22 14 smoke does not satisfy that criteria.

12:13:25 15 Q What degree of certainty? You included in  
12:13:28 16 there you have to be able to do it with some degree of  
12:13:31 17 certainty?

12:13:32 18 A I've actually given the standards of what  
12:13:37 19 constitutes a certain -- some degree of certainty. The  
12:13:42 20 generally accepted criterion -- these are some of the  
12:13:46 21 them. Not all of them -- of causality.

12:13:51 22 One aspect of certainty is when a study looks  
12:13:54 23 at a relative risk, just because the relative risk exceeds  
12:13:59 24 one does not mean there's an association. One has to  
12:14:03 25 establish statistical significance. In many of the study  
12:14:07 26 in the ETS field in general, with regard to ETS and  
12:14:11 27 respiratory health effects in children, and in particular  
12:14:14 28 with regard to ETS and intrauterine growth retardation,  
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12:14:18 1 that particular standard by some of the scientists has  
12:14:22 2 gone by the -- has gone -- has been totally ignored.  
12:14:28 3 They've ignored the standard of certainty completely by  
12:14:32 4 not even accepting the 1 in 20 -- the level of less than  
12:14:39 5 .05.

12:14:40 6 Q I want to make sure I've got your standard  
12:14:44 7 of certainty.

12:14:45 8 And I've got that you think there should be a  
12:14:47 9 relative risk of two or more?

12:14:48 10 A Okay.

12:14:49 11 Q Right?

12:14:49 12 A Okay.

12:14:50 13 Q And that it should be reproducible?

12:14:52 14 A That's right.

12:14:53 15 Q At least what percent of the time?

12:14:55 16 A That's a hard number to say. That's sort of  
12:14:58 17 an intuitive thing. But I would say if it's 70 to 80  
12:15:02 18 percent of the time when you try it and you see a  
12:15:06 19 statistically significant association.

12:15:07 20 Q All right. And then third, you said you  
12:15:09 21 should have some degree of certainty that you're actually  
12:15:12 22 measuring what you're measuring?

12:15:13 23 A That's right.

12:15:13 24 Q And so -- that's where I was now.

12:15:15 25 A Okay. Let's focus in on that.

12:15:17 26 Q Because -- because you used the definition in  
12:15:19 27 the answer.

12:15:19 28 A Okay.  
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12:15:20 1 Q So I want to know what do you mean some  
12:15:22 2 degree of certainty?

12:15:23 3 A Okay. I think your -- your requesting some  
12:15:29 4 clarification is valid, because I understand. I believe  
12:15:32 5 what you have to do there is if you were interpreting --  
12:15:38 6 making an interpretation or defining a model, and you're  
12:15:42 7 saying it's ETS. Let's assume you see an association with  
12:15:47 8 parental smoking and an elevated risk, and you're saying  
12:15:51 9 it's due to environmental tobacco smoke. You have to --  
12:15:56 10 in order to make that conclusion scientifically valid with  
12:16:00 11 some degree of certainty, you have to -- have to rule out

12:16:09 12 as many alternative explanations as one possibly can.  
12:16:11 13 And as I indicated earlier, in the preschool  
12:16:14 14 issue, it seems to me that an in utero effect of active  
12:16:19 15 smoking is a far more likely explanation than ambient  
12:16:24 16 exposure to environmental tobacco smoke because the amount  
12:16:27 17 of tobacco pollution or the uptake of tobacco constituents  
12:16:35 18 that an ETS exposure takes is very small relative to  
12:16:39 19 active smoking. In some cases, you can't measure an  
12:16:42 20 uptake of carboxy- -- in terms of an elevation, of  
12:16:46 21 carboxyhemoglobin. And in some cases, you see very small  
12:16:51 22 elevations in the more specific nicotine marker, cotinine.  
12:16:56 23 Q Let me stop you.  
12:16:59 24 I'm not asking you to explain now why you  
12:17:01 25 think it's not certain. I'm trying to understand what, in  
12:17:07 26 your mind, gives you the degree of certainty that you can  
12:17:11 27 say there's a real connection. You understand? I'm  
12:17:13 28 trying to define your terms.  
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12:17:14 1 A Well --  
12:17:15 2 Q I want to know what does it mean to say you  
12:17:18 3 need to have a degree of certainty that you're actually  
12:17:21 4 measuring what you're measuring?  
12:17:23 5 A You're asking me to predict something that I  
12:17:26 6 haven't seen yet. I'll know it when I see it.  
12:17:29 7 Q Well, how does a scientist know whether there  
12:17:31 8 is a degree of certainty that you're measuring something?  
12:17:35 9 A Well, it depends on a particular issue. I  
12:17:37 10 think as much as I know of the active smoking issue where  
12:17:41 11 there's a 10 or above.  
12:17:42 12 Q Is this a quantitative measurement to have a  
12:17:44 13 degree of certainty that you're actually measuring what  
12:17:46 14 you're measuring?  
12:17:47 15 MR. STONE: Had you -- I just want to be  
12:17:49 16 clear. I know there was problems with everybody stepping  
12:17:51 17 on everybody's answer. I don't know if the witness had  
12:17:54 18 finished his earlier answer before you put your next  
12:17:56 19 answer (sic) to him. He was starting to answer about  
12:17:59 20 active smoking where there was a 10 or above. And I think  
12:18:02 21 the next question interrupted him.  
12:18:04 22 If you want him to complete his answer, maybe  
12:18:07 23 we should check and see if he did. I don't know.  
12:18:09 24 BY MR. HULBURT:  
12:18:10 25 Q When you say you need to have a degree of  
12:18:12 26 certainty that you're actually measuring the desired  
12:18:15 27 thing, is that a quantitative concept that you need to be  
12:18:18 28 50-percent certain, 95-percent certain, 75-percent  
Vail, Christians & Associates (619)544-8344 108  
12:18:22 1 certain, or is that just, as you said, you know it when  
12:18:25 2 you see it?  
12:18:26 3 A Well, I think -- I think it's the body of  
12:18:28 4 evidence. It's a composite of various aspects. If it's a  
12:18:35 5 multiple -- multiple studies, it's how reproducible the  
12:18:38 6 studies are adds to the element of certainty. Magnitude  
12:18:44 7 of risk or strength of associations is another aspect  
12:18:48 8 which enters into that judgment. And the other aspect of  
12:18:53 9 it is the term that Bradford Hill has used, coherent,  
12:18:59 10 which means is it mechanistically a reasonable explanation  
12:19:05 11 and is it the best one as opposed to alternate  
12:19:08 12 explanations.  
12:19:08 13 And the other thing which I neglected to  
12:19:13 14 mention, is there a gradient of an association? Are there  
12:19:16 15 dose response effects?  
12:19:19 16 In terms of the parental smoking and

12:19:23 17 respiratory health effects in preschool children where  
12:19:27 18 there is an association, the thing that makes me uncertain  
12:19:34 19 about it relates to the fact that the -- primarily, it's  
12:19:41 20 related to the fact that there are many alternate  
12:19:45 21 explanations other than ETS which have to be addressed.  
12:19:50 22 My intuitive feeling is the most likely explanation is  
12:19:54 23 that it's a prenatal effect of the mother smoking during  
12:19:59 24 pregnancy. But there are a whole range of other issues  
12:20:02 25 that have not been addressed as well. The whole issue of  
12:20:08 26 confounders in general. Alternate explanations that can  
12:20:12 27 account for the association between parental smoking and  
12:20:17 28 increased respiratory health in children.

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12:20:20 1 Q Have you -- have you recommended to any of  
12:20:22 2 the tobacco scientists that they do further studies in  
12:20:27 3 order to resolve the confounders?

12:20:29 4 A Well, no. I haven't interacted with the  
12:20:32 5 tobacco scientists. But I guess by my position on the  
12:20:36 6 issues with Cal EPA, for example, and the things I've  
12:20:40 7 written with regard to the U.S. EPA, I've recommended that  
12:20:45 8 they address this issue. And if you look at the responses  
12:20:48 9 of the Cal EPA scientists, their responses, they've all  
12:20:52 10 been taking care of.

12:20:52 11 Q How about Sharon Boyse, have you suggested to  
12:20:56 12 her that her company do research to address the  
12:20:59 13 confounders?

12:20:59 14 A I haven't made that recommendation.

12:21:02 15 Q Why not?

12:21:03 16 A Well, it's not my position. I am a -- well,  
12:21:07 17 I've made the recommendation in general. I don't spend my  
12:21:11 18 time doing that. I'm asked to do an assignment, and this  
12:21:16 19 is the assignment that I do.

12:21:17 20 Q Is it your opinion that it's research in the  
12:21:21 21 confounders that is necessary in order to satisfy yourself  
12:21:26 22 that the relationship between ETS exposure and under --  
12:21:31 23 and children under five is actually caused by ETS?

12:21:34 24 MR. STONE: Objection; misstates the  
12:21:36 25 witness's prior testimony. Vague and ambiguous.  
12:21:38 26 You can answer.  
12:21:39 27 THE WITNESS: Would you restate that  
12:21:40 28 question.

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12:21:41 1 BY MR. HULBURT:

12:21:41 2 Q Yeah.

12:21:42 3 Is it your thought that further research on  
12:21:43 4 the confounders needs to be done in order to satisfy  
12:21:46 5 yourself that the reported connection between respiratory  
12:21:49 6 health effects in preschool children and ETS is actually  
12:21:52 7 caused by the ETS?

12:21:54 8 A Well, to say satisfy myself is rather  
12:21:57 9 presumptuous because I'm --

12:21:58 10 MR. STONE: Same objections, by the way.  
12:22:01 11 Go ahead.  
12:22:02 12 THE WITNESS: -- I'm one person.

12:22:03 13 BY MR. HULBURT:

12:22:03 14 Q Right.

12:22:04 15 But you're the one person I'm talking to  
12:22:06 16 now. So I want to --

12:22:07 17 MR. STONE: Wait a minute. We're getting --  
12:22:09 18 A, it's 12:22, and I need to take a call at 12:30 and we  
12:22:14 19 need a lunch break.  
12:22:15 20 B, you're arguing with the witness,  
12:22:16 21 Mr. Hulburt. You're interrupting the witness. You're

12:22:19 22 trying to push him into the kind of answer that you want  
12:22:22 23 to give as opposed to the answer he wants to give. Just  
12:22:25 24 as he needs to wait for you to finish your questions, you  
12:22:29 25 need to let him finish his answer. It's not for you to  
12:22:30 26 interrupt him and correct his answer or try to restate  
12:22:32 27 your question in an argumentative fashion.  
12:22:35 28 So if we want to go back to the pending  
Vail, Christians & Associates (619)544-8344 111  
12:22:36 1 question, we can have the reporter read it back, the  
12:22:39 2 witness can answer it, then we need to take a lunch break.  
12:22:42 3 BY MR. HULBURT:  
12:22:42 4 Q Do you recall the question?  
12:22:43 5 A No.  
12:22:44 6 Q Is that the kind of research that needs to be  
12:22:47 7 done?  
12:22:47 8 MR. STONE: Let's have the question read back  
12:22:50 9 in its entirety, please.  
12:22:51 10 MR. HULBURT: That's fine.  
12:23:21 11 (The following question was read by the  
12:23:22 12 reporter:  
12:23:22 13 "Q Yeah.  
12:23:22 14 Is it your thought that further research on  
12:23:22 15 the confounders needs to be done in order to satisfy  
12:23:22 16 yourself that the reported connection between respiratory  
12:23:22 17 health effects in preschool children and ETS is actually  
12:23:22 18 caused by the ETS?")  
12:23:22 19 MR. STONE: Same objections.  
12:23:24 20 You can answer.  
12:23:25 21 THE WITNESS: I think that's, in essence, a  
12:23:29 22 major issue that has to be addressed. Looking at  
12:23:31 23 confounding variables of which I would include smoking  
12:23:35 24 during pregnancy as a confounding variable, but I'd also  
12:23:39 25 include a composite of confounding variables related to  
12:23:44 26 socioeconomic status or standard of living, because there  
12:23:48 27 is a correlation between -- an inverse correlation between  
12:23:52 28 smoking and household income, for example.  
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12:23:56 1 I would also think that a way one should  
12:24:01 2 really improve that study is validation of tobacco smoke  
12:24:05 3 exposure, because a majority of those studies, and I would  
12:24:11 4 say it's 93 percent of the studies in both age groups,  
12:24:14 5 have failed to validate that parental smoking has anything  
12:24:20 6 to do with the child's exposure to ETS. There's no marker  
12:24:24 7 of that uptake in 93 percent of the studies on both age  
12:24:31 8 groups.  
12:24:31 9 And I also think the studies probably should  
12:24:34 10 have more validation of the endpoint, because a majority  
12:24:38 11 of the studies, about 50 percent of those studies, have  
12:24:45 12 failed to validate that the illness is what it is, because  
12:24:49 13 there's nothing in the way of confirmation from medical  
12:24:52 14 records or physical examination. They're based on  
12:24:56 15 questionnaire responses.  
12:24:57 16 BY MR. HULBURT:  
12:24:57 17 Q Do you believe that the tobacco companies  
12:25:00 18 themselves should be doing that research to address the  
12:25:03 19 issues you just raised?  
12:25:05 20 MR. STONE: Objection; lacks foundation,  
12:25:07 21 calls for speculation, outside any area on which this  
12:25:10 22 witness has been designated to testify, outside his areas  
12:25:13 23 of expertise.  
12:25:14 24 MR. LENDRUM: I would join in the objection.  
12:25:18 25 THE WITNESS: And I can answer the question?  
12:25:19 26 MR. STONE: You can.

12:25:20 27 THE WITNESS: I have no opinion on the  
12:25:21 28 subject.  
Vail, Christians & Associates (619)544-8344 113  
12:25:21 1 BY MR. HULBURT:  
12:25:21 2 Q And you've not recommended to any of them  
12:25:24 3 that they do that research?  
12:25:25 4 A I don't interact with the tobacco people in  
12:25:32 5 that capacity. I interact on the basis of scientific  
12:25:41 6 availability of information, and I make an assessment of  
12:25:44 7 what I think the science is. I'm not involved in the  
12:25:47 8 policy in that regard.  
12:25:49 9 MR. STONE: Okay. We need to take our lunch  
12:25:53 10 break if we can.  
12:25:53 11 MR. HULBURT: That's fine.  
12:25:54 12 MR. STONE: Thanks.  
12:25:54 13 MR. HULBURT: Let's go off the record.  
12:25:56 14 VIDEOGRAPHER: Off the record at 12:26 p.m.  
12:26:01 15 (Lunch recess.)  
13:47:18 16 VIDEOGRAPHER: We are back on the record at  
13:47:44 17 1:47 p.m.  
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13:47:45 1 San Diego, California; Monday, July 24, 2000; 1:47 p.m.  
13:47:45 2  
13:47:45 3 EXAMINATION (RESUMED)  
13:47:45 4 BY MR. HULBURT:  
13:47:45 5 Q Dr. Witorsch, during the break, you or your  
13:47:59 6 attorney was able to obtain a copy of your C.V., which  
13:48:03 7 I've marked as Exhibit 5194.  
13:48:07 8 (Exhibit 5194 was marked for identification.)  
13:48:10 9 BY MR. HULBURT:  
13:48:10 10 Q Let me ask you to take a look at that and  
13:48:13 11 confirm for me that that is your most current C.V. Then I  
13:48:16 12 want to talk about whatever would need to be added to it,  
13:48:19 13 deleted, or changed to make it more current today.  
13:48:22 14 A It's about a year out of date, based on the  
13:48:33 15 revised list at the end, 6/23/99. I did submit a revised  
13:48:42 16 one as part of the activities at the university recently  
13:48:50 17 because we are reviewed annually. And so I'm sure I  
13:48:54 18 updated it since that time.  
13:48:56 19 But it's -- for all intents and purposes,  
13:49:00 20 it's -- it gives a good picture of my background. I can  
13:49:11 21 update it.  
13:49:11 22 Q Is there anything related to ETS that you  
13:49:14 23 would add to your C.V. to make it more current?  
13:49:17 24 A Let me look and see.  
13:49:19 25 Not that I can see, no.  
13:50:00 26 Q Do you receive any funding -- for lack of a  
13:50:10 27 better word, any funding from any tobacco industry sources  
13:50:15 28 other than through your consulting work? What I'm trying  
Vail, Christians & Associates (619)544-8344 115  
13:50:19 1 to get to is have you received any grants, any chairs, any  
13:50:25 2 support for your lab, any other sources of funding of any

13:50:29 3 kind whatsoever from the tobacco industry besides through  
13:50:33 4 CEHHT?

13:50:36 5 A I've never received anything in terms of my  
13:50:40 6 laboratory activities from the tobacco industry. The one  
13:50:47 7 time I attempted through CIAR, as I told you earlier, my  
13:50:54 8 grant proposal was turned down. From time to time, I have  
13:50:57 9 funded my other activities out of my own pocket. So that,  
13:51:00 10 indirectly, has come from consulting money, but it was one  
13:51:03 11 where I thought I had to go to a meeting. And it had  
13:51:09 12 nothing to do with anything related to tobacco, but it was  
13:51:13 13 personal income. And I paid for the expense out of my own  
13:51:17 14 pocket or I purchased some supplies for my office or  
13:51:22 15 something like that, at the university. But nothing ever  
13:51:32 16 direct.

13:51:32 17 Q Have you ever received any other -- any  
13:51:44 18 nonmonetary benefits of any kind from any tobacco industry  
13:51:48 19 sources? I suppose it could be gifts, travel, equipment,  
13:51:56 20 any benefits other than money.

13:51:58 21 MR. STONE: Objection; vague and ambiguous.  
13:51:59 22 You can answer.

13:52:01 23 THE WITNESS: Never for something other than  
13:52:04 24 a service rendered. If I've had to be at a certain venue,  
13:52:08 25 I've gotten that travel. But I haven't received any  
13:52:11 26 perks, no.

13:52:11 27 BY MR. HULBURT:

13:52:11 28 Q Do you agree with the statement that ETS has  
13:52:24 1 Vail, Christians & Associates (619)544-8344 116  
13:52:28 2 never been shown scientifically to cause any adverse  
13:52:31 3 health effects in nonsmokers?

13:52:33 4 A Could you repeat that statement.

13:52:36 5 Q ETS has never been shown scientifically to  
13:52:39 6 cause any adverse health effects in nonsmokers.

13:52:41 7 MR. STONE: Objection. In part, beyond the  
13:52:44 8 areas on which this witness has been designated to testify  
13:52:48 9 as an expert. Overbroad and compound. Also vague and  
13:52:49 10 ambiguous and lacks foundation.

13:52:53 11 You can answer as best you can.

13:52:54 12 THE WITNESS: I agree with the statement, but  
13:53:01 13 I wouldn't phrase it that way. I think the term "never"  
13:53:04 14 is much too absolute. And it's not the way I would ever  
13:53:07 15 term anything scientifically. I just feel it's a little  
13:53:11 16 bit too assertive and lacks an objective view.

13:53:17 17 BY MR. HULBURT:

13:53:21 18 Q Where we left before, where we were talking  
13:53:24 19 about what does it mean from your perspective where  
13:53:26 20 something has been shown or has not been shown, or in this  
13:53:29 21 sentence the language was has never been shown  
13:53:30 22 scientifically.

13:53:32 23 I want to know from you, the scientist, what  
13:53:34 24 does something like that mean, to show something  
13:53:38 25 scientifically, to cause an adverse health effect.

13:53:40 26 MR. STONE: Objection; lacks foundation, no  
13:53:43 27 showing the witness wrote the document. So there's no  
13:53:46 28 showing he's in a position to interpret or construe it.

13:53:49 1 It's overbroad. It's outside the area on  
13:53:52 2 Vail, Christians & Associates (619)544-8344 117  
13:53:54 3 which he's been designated to testify, at least in part.  
13:53:57 4 It calls for speculation, and it lacks foundation.

13:54:03 5 You can answer as best you can.

13:54:07 6 THE WITNESS: As I said before, the term  
13:54:07 7 "never" troubles me for my own personal writing style and  
the way I would express it. It just has a connotation of  
being advocative, and I would probably phrase it in a

13:54:12 8 different way, just to be prudent and cautious about my  
13:54:15 9 view. Not because I -- I am -- I am tentative, but just  
13:54:21 10 that I feel it is a responsive way of saying it.  
13:54:25 11 BY MR. HULBURT:  
13:54:25 12 Q How would you say it?  
13:54:26 13 A Just rephrase the statement again, and maybe  
13:54:28 14 I'll just -- I -- I would probably not use the word  
13:54:33 15 "never." I would probably say there was no data to date  
13:54:37 16 that supports such an association or something to that  
13:54:39 17 effect.  
13:54:40 18 Q The sentence is ETS has never been shown  
13:54:44 19 scientifically to cause any adverse health effects in  
13:54:46 20 nonsmokers.  
13:54:47 21 MR. STONE: Same objections.  
13:54:48 22 THE WITNESS: While I think, in essence,  
13:54:54 23 reading it, I agree overall with that statement, if I were  
13:54:57 24 given that document to review, I would reword that to  
13:55:01 25 imply a degree of uncertainty because that's the  
13:55:05 26 responsible thing to do. If I were to write it de novo, I  
13:55:09 27 would say something to the effect that the evidence to  
13:55:12 28 date does not support an association. I think that I  
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13:55:16 1 would be more comfortable with and that's the responsible  
13:55:20 2 thing to say.  
13:55:21 3 BY MR. HULBURT:  
13:55:21 4 Q Do you have children?  
13:55:57 5 A Yes.  
13:55:57 6 Q Have you ever been a smoker?  
13:55:59 7 A Yes.  
13:55:59 8 Q Are you a smoker now?  
13:56:01 9 A No.  
13:56:01 10 Q How long -- during what period of time were  
13:56:03 11 you a smoker?  
13:56:04 12 A I was a smoker probably from my mid to late  
13:56:10 13 adolescent years, as a teenager, until I was in my late  
13:56:14 14 thirties. I stopped over 20 years ago.  
13:56:18 15 Q And so how many packs a day were you a smoker?  
13:56:21 16 A Probably at my maximum, one pack a day.  
13:56:25 17 Q And did you smoke around your children?  
13:56:30 18 A Yes.  
13:56:30 19 Q Did you have any concerns, health concerns  
13:56:33 20 when you smoked around your children, for them?  
13:56:36 21 A I didn't have any concerns at the time  
13:56:40 22 because, at the time, smoking in the presence of children  
13:56:43 23 was really a nonissue.  
13:56:44 24 Q All right. And that was before you did any  
13:56:47 25 work on the subject of ETS?  
13:56:48 26 A Oh, yes. Yes.  
13:56:49 27 Q Would you have any concerns about smoking  
13:56:51 28 around children now?  
Vail, Christians & Associates (619)544-8344 119  
13:56:52 1 A Yes.  
13:56:52 2 Q Why?  
13:56:53 3 A Well, it has more to do with what I know in  
13:56:58 4 terms of what cigarette smoke is to a nonsmoking  
13:57:02 5 individual. It's a very unpleasant experience. It's  
13:57:08 6 caustic to the nostrils. It doesn't smell well. It has a  
13:57:12 7 bad odor, and why should I subject a nonsmoker to these  
13:57:16 8 unpleasant aromas and particulate matter.  
13:57:23 9 Q So that concern would be equal as it relates  
13:57:26 10 to children or adults?  
13:57:28 11 A Yes. Yes. It would be a courtesy.  
13:57:30 12 Q A courtesy to nonsmokers?



13:57:33 13 A That's right.  
13:57:34 14 Q Would you have any health concerns about  
13:57:35 15 smoking around children now, given all that you know  
13:57:37 16 now?  
13:57:42 17 MR. STONE: Again, I would say, in part, this  
13:57:44 18 goes beyond the area in which Dr. Witorsch has been  
13:57:46 19 designated as an expert witness to testify.  
13:57:49 20 But you can express your views or beliefs on  
13:57:52 21 all the areas that Mr. Hulburt is inquiring about.  
13:57:55 22 THE WITNESS: I -- based on what I know  
13:57:59 23 scientifically, I don't have any health concerns, but when  
13:58:02 24 you're dealing with your own children or someone else's  
13:58:05 25 children, there's that human factor. And I don't think  
13:58:08 26 until it's been an absolutely proven thing, as a courtesy,  
13:58:12 27 I would not -- I would not smoke around another smoker --  
13:58:18 28 I mean, a nonsmoker or a child.  
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13:58:20 1 BY MR. HULBURT:  
13:58:20 2 Q Because of the possibility of an adverse  
13:58:22 3 health effect?  
13:58:23 4 MR. STONE: Same objections.  
13:58:29 5 THE WITNESS: I wouldn't exclude it totally,  
13:58:31 6 but that's -- that's actually responding as a parent and  
13:58:36 7 as a citizen as opposed to as a scientist  
13:58:39 8 BY MR. HULBURT:  
13:58:39 9 Q Have you ever told anybody not to smoke  
13:58:41 10 around children -- recommended to anybody that they not  
13:58:44 11 smoke around children?  
13:58:45 12 A I don't regard myself as a crusader. It's  
13:58:48 13 not my business. No, I have not done that, that I can  
13:58:54 14 recall.  
13:58:54 15 Q As a scientist who studied the subject of ETS  
13:58:58 16 or secondhand smoke for some 14 years now, I guess, do you  
13:59:04 17 believe that parents should be told not to smoke around  
13:59:07 18 their children?  
13:59:08 19 MR. STONE: Objection; outside the area on  
13:59:10 20 which this witness has been designated to testify and  
13:59:12 21 outside his areas of expertise.  
13:59:14 22 You can respond to the question.  
13:59:20 23 THE WITNESS: I think in the total order of  
13:59:25 24 things, I think it might be the responsibility of  
13:59:27 25 government to at least inform the citizens -- the  
13:59:32 26 citizenry that smoking in the presence of a nonsmoker is  
13:59:36 27 not the most pleasant experience, and it would be prudent  
13:59:40 28 not to.  
Vail, Christians & Associates (619)544-8344 121  
13:59:40 1 I am not quite sure whether I would convey  
13:59:47 2 misinformation to get to that point, though.  
13:59:49 3 BY MR. HULBURT:  
13:59:49 4 Q Well, if -- am I correct in understanding  
13:59:55 5 that from your perspective, there's uncertainty about the  
13:59:58 6 health effects of ETS related to children?  
14:00:02 7 MR. STONE: Objection; misstates the  
14:00:03 8 witness's prior testimony, beyond the areas on which he's  
14:00:07 9 been designated to testify, compound.  
14:00:09 10 You can answer.  
14:00:10 11 THE WITNESS: I -- to be prudent, I would say  
14:00:13 12 there's uncertainty. Scientifically, I'm not sure there's  
14:00:18 13 that much uncertainty. I think they haven't -- well, let  
14:00:21 14 me qualify myself.  
14:00:22 15 I did leave an area of question with regard  
14:00:27 16 to parental smoking and effects in young children.  
14:00:34 17 Although, my experience and my reading and my

14:00:40 18 understanding of the area would seem to such alternate  
14:00:44 19 mechanisms, I do say that while one cannot exclude ETS,  
14:00:48 20 there are alternate possibilities, some of which seem more  
14:00:51 21 compelling than ETS.  
14:00:52 22 BY MR. HULBURT:  
14:00:52 23 Q All right. So given the uncertainty in your  
14:00:55 24 mind, let me just stick on that word, do you believe,  
14:00:59 25 knowing all that you know, that parents should be told  
14:01:03 26 about the uncertainty, and that based on the uncertainty,  
14:01:08 27 they should not smoke around their infants?  
14:01:10 28 MR. STONE: Objection; vague and ambiguous,  
Vail, Christians & Associates (619)544-8344 122  
14:01:11 1 compound, outside the areas on which this witness has been  
14:01:16 2 designated to testify, lacks foundation, is overbroad.  
14:01:21 3 THE WITNESS: And I can answer?  
14:01:22 4 MR. STONE: Yes, you may answer.  
14:01:24 5 THE WITNESS: Well, you know, I -- I have to  
14:01:26 6 give that some thought, because I think the way it's done  
14:01:28 7 now is intellectually and scientifically dishonest,  
14:01:32 8 because I think the antismoking people tend to create a  
14:01:38 9 scenario which does not exist.  
14:01:40 10 If one could develop a way of saying --  
14:01:44 11 conveying this information to the citizenry, which was  
14:01:47 12 intellectually and scientifically honest, then I'd say  
14:01:51 13 that's absolutely correct, because why should a nonsmoker  
14:01:54 14 be subject to something unpleasant.  
14:01:56 15 But from what I've seen and read, you know,  
14:01:59 16 on the airways, well, you know, if you smoke, you're going  
14:02:03 17 to kill your child and that type of scenario I think is  
14:02:06 18 overkill and really scientifically irresponsible and opens  
14:02:11 19 up a can of worms in terms of abuse of scientific  
14:02:18 20 principles in a lot of areas.  
14:02:20 21 So I'm not certain that the way it's being  
14:02:22 22 done is the appropriate way it's being done.  
14:02:26 23 BY MR. HULBURT:  
14:02:26 24 Q Well, if ETS might cause adverse health  
14:02:29 25 effects in infants and preschool-aged children, and, as  
14:02:35 26 you say, it's just unresolved yet because we haven't done  
14:02:39 27 enough studies on the confounders, then don't you agree  
14:02:42 28 that the manufacturer of that potentially dangerous  
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14:02:46 1 product should warn people not to smoke around the  
14:02:49 2 children?  
14:02:49 3 MR. STONE: Objection; outside the area on  
14:02:51 4 which this witness has been designated to testify, lacks  
14:02:54 5 foundation, calls for speculation, misstates his prior  
14:02:59 6 testimony, is vague and ambiguous, and overbroad, and  
14:03:02 7 calls for a legal conclusion, outside this witness's area  
14:03:07 8 of expertise, and on a matter that is properly given to  
14:03:10 9 the court for its determination.  
14:03:12 10 Subject to those objections, you can answer,  
14:03:15 11 Dr. Witorsch.  
14:03:16 12 THE WITNESS: I really don't have much of an  
14:03:18 13 opinion on what the role of the tobacco industry should be  
14:03:21 14 in this area.  
14:03:22 15 BY MR. HULBURT:  
14:03:22 16 Q But you think that government should tell  
14:03:27 17 people not to smoke around children?  
14:03:29 18 MR. STONE: Same objections.  
14:03:34 19 THE WITNESS: And I can answer?  
14:03:35 20 MR. STONE: Yes, you can.  
14:03:36 21 THE WITNESS: As a citizen -- as an American  
14:03:38 22 citizen, I feel the government has a right to inform the

14:03:42 23 public of what may adversely affect their health. But  
14:03:48 24 they also have an obligation to be truthful, and in some  
14:03:53 25 way do it in an honest fashion.  
14:03:55 26 So if one can resolve those discrepancies,  
14:03:59 27 then I'd say it's appropriate. I do not feel it's  
14:04:02 28 appropriate for government officials because they have  
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14:04:07 1 some feeling or bias that something is adverse to  
14:04:12 2 someone's health, to develop a scenario that is almost  
14:04:18 3 absolutist.  
14:04:20 4 BY MR. HULBURT:  
14:04:20 5 Q Well, I guess I'm trying to ask you, as a  
14:04:23 6 scientist who believes there's uncertainty about the  
14:04:28 7 health effects of ETS, do you agree, as a scientist, that  
14:04:31 8 the more prudent course is to tell people not to expose  
14:04:36 9 children to the potentially harmful ETS until science has  
14:04:41 10 proven that it's not harmful?  
14:04:44 11 MR. STONE: Objection; asked and answered,  
14:04:45 12 outside the area on which this witness has been designated  
14:04:48 13 to testify, lacks foundation, calls for speculation, is  
14:04:51 14 compound and overbroad. It's also argumentative as  
14:04:55 15 presently framed.  
14:04:57 16 You can answer it as best you can,  
14:04:59 17 Dr. Witorsch.  
14:05:00 18 THE WITNESS: I'd have to think that one  
14:05:03 19 through. I really can't give you an answer. I don't  
14:05:08 20 think it's appropriate to do so at the expense of  
14:05:14 21 scientific honesty.  
14:05:16 22 BY MR. HULBURT:  
14:05:16 23 Q Knowing all that you know about ETS, what  
14:05:26 24 would you tell a smoking mother about whether or not she  
14:05:30 25 should smoke next to her child?  
14:05:32 26 A Well, first --  
14:05:33 27 MR. STONE: Same objections.  
14:05:34 28 You can answer.  
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14:05:35 1 THE WITNESS: First of all, the first thing  
14:05:37 2 I'd tell her is don't smoke during pregnancy. I mean, I  
14:05:41 3 think that the government has an obligation -- somebody  
14:05:45 4 has an obligation to tell women that the evidence  
14:05:50 5 indicates, although not in an absolute sense, but in a  
14:05:55 6 reasonable degree of certainty, that smoking during  
14:05:58 7 pregnancy adversely affects the outcome of the offspring.  
14:06:03 8 So I would advise a woman not to smoke during pregnancy.  
14:06:06 9 And in terms of smoking postpartum, based on  
14:06:10 10 what I know and what I feel in terms of what I've seen the  
14:06:14 11 literature with regard to the lack of adjusting for  
14:06:21 12 smoking during pregnancy, the lack of adjustment of  
14:06:24 13 critical confounding variables, I would tell the mother  
14:06:28 14 not to smoke around the kid, but mainly because it's not a  
14:06:31 15 pleasant experience for a nonsmoker.  
14:06:34 16 BY MR. HULBURT:  
14:06:34 17 Q Not because of any concern for any adverse  
14:06:38 18 health effects?  
14:06:39 19 MR. STONE: Same objections.  
14:06:40 20 THE WITNESS: I don't think there's evidence  
14:06:42 21 to support concern. I think the ETS interpretation is a  
14:06:53 22 leap of faith.  
14:06:54 23 BY MR. HULBURT:  
14:06:54 24 Q What are the adverse health effects of  
14:06:58 25 smoking during pregnancy?  
14:07:00 26 MR. STONE: Objection. This is beyond the  
14:07:02 27 area on which this witness has been designated to testify,

14:07:05 28 beyond any areas of dispute in this litigation. It's  
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14:07:08 1 compound and overbroad. I'll let him answer briefly in  
14:07:12 2 this area, but I'm not going to allow this witness to be  
14:07:15 3 pulled into areas that are not relevant to this  
14:07:17 4 litigation.

14:07:18 5 THE WITNESS: Well, I think smoking during  
14:07:21 6 pregnancy is -- appears to be associated with growth  
14:07:28 7 retardation in utero. So you produce low birth weight  
14:07:34 8 offspring. That means there's an increased risk of  
14:07:37 9 infants being smaller than they would be on average if the  
14:07:41 10 parent was not a smoker. A one-pack-a-day consumption of  
14:07:46 11 cigarettes would produce approximately a 200-gram decrease  
14:07:52 12 in body weight, on average. That's about eight ounces,  
14:07:59 13 and it's -- the evidence suggests that low birth weight  
14:08:03 14 offspring, offspring that have -- well, I want to qualify  
14:08:08 15 that further.

14:08:08 16 That in addition to that, a pack a day  
14:08:12 17 smoking increases the risk of offspring that are under  
14:08:17 18 2500 grams, 2500 grams or less, which is about five and a  
14:08:22 19 half pounds. It doubles that increase. So it produces  
14:08:26 20 low birth weight offspring.

14:08:27 21 And the literature supports the concept that  
14:08:30 22 low birth weight offspring are at risk for a lot of other  
14:08:34 23 disorders. But the only thing that's been shown  
14:08:38 24 substantially between active smoking during pregnancy and  
14:08:43 25 offspring is low birth weight. So it opens up the  
14:08:48 26 possibility of a whole variety of effects.

14:08:51 27 And there's also evidence to indicate that  
14:08:54 28 women who smoke during pregnancy, their offspring have  
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14:08:59 1 decrements in pulmonary function, have increased incidence  
14:09:05 2 in disease, respiratory diseases. So that's the extent of  
14:09:08 3 what I feel is appropriate to talk about with regard to  
14:09:12 4 active smoking during pregnancy.

14:09:18 5 BY MR. HULBURT:

14:09:18 6 Q Are there any similar health effects for ETS  
14:09:21 7 exposure to the pregnant mother, health effects to the  
14:09:24 8 infant?

14:09:26 9 MR. STONE: Same -- let me see.  
14:09:38 10 You can answer.

14:09:40 11 THE WITNESS: I would say based on my view of  
14:09:41 12 the studies with regard to ETS exposure of the nonsmoking  
14:09:48 13 woman to the smoke of others -- okay. ETS exposure during  
14:09:52 14 pregnancy, that the evidence is very, very weak, if at  
14:09:57 15 all, of an association between ETS exposure and  
14:10:04 16 intrauterine growth retardation of offspring.

14:10:07 17 BY MR. HULBURT:

14:10:07 18 Q So is it more probable than not that there is  
14:10:10 19 any health effect for the fetus or the infant from the  
14:10:14 20 mother being exposed to ETS during the pregnancy?

14:10:17 21 MR. STONE: Objection; vague and ambiguous,  
14:10:19 22 lacks foundation, compound and overbroad.

14:10:24 23 You can answer.

14:10:26 24 THE WITNESS: Based on what I've seen of the  
14:10:27 25 literature, I think there's little chance that ETS  
14:10:35 26 exposure during pregnancy to the nonsmoking mother would  
14:10:41 27 have an effect on her offspring.

14:10:43 28 BY MR. HULBURT:  
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14:10:43 1 Q What is the basis of that opinion?

14:10:45 2 MR. STONE: Same objections.

14:10:47 3 THE WITNESS: I've looked at the literature.

14:10:48 4 And there are 46 papers that I know of that have looked  
14:10:54 5 at, in essence, exposure to other people's smoke and low  
14:10:58 6 birth weight of offspring, either at a mean decrement in  
14:11:04 7 birth weight or increased incidents of small babies. And  
14:11:11 8 approximately 70 percent of the studies published failed  
14:11:15 9 to show a statistically significant effect.  
14:11:19 10 BY MR. HULBURT:  
14:11:21 11 Q Does that mean that 30 percent did show a  
14:11:24 12 statistically significant effect?  
14:11:25 13 A 30 percent of the studies may have shown some  
14:11:28 14 significant effect, but there are at least 15 explanations  
14:11:32 15 and probably more for impaired effects on birth weight --  
14:11:37 16 decreased birth weight that have been reported. And so  
14:11:42 17 those things have not been addressed. So those studies --  
14:11:46 18 Q Confounders, you mean?  
14:11:48 19 A Confounding variables.  
14:11:49 20 Those studies have not addressed the  
14:11:51 21 confounders, in my opinion, adequately.  
14:11:53 22 Q When you identify something as a confounder,  
14:11:59 23 does that mean that you have some statistical evidence or  
14:12:02 24 empirical evidence that that confounding variable actually  
14:12:06 25 has an effect?  
14:12:07 26 A Not necessarily. I usually regard it as  
14:12:10 27 potential confounders, but many of which we regard in our  
14:12:13 28 analysis are certainly ones that have been shown in the  
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14:12:17 1 past to have an influence on birth weight of offspring.  
14:12:21 2 Q So when you say that there are 15 -- or at  
14:12:23 3 least 15 potentially confounding variables, that doesn't  
14:12:26 4 mean that there is any scientific evidence that each of  
14:12:29 5 those 15 variables has any effect?  
14:12:32 6 A That's right. They have not been addressed.  
14:12:35 7 There's another aspect I want to clarify of  
14:12:38 8 why I find the studies weren't showing a statistically  
14:12:47 9 significant association between ETS exposure and the smoke  
14:12:50 10 of others and low birth weight and offspring.  
14:12:53 11 And that is the fact that several of those  
14:12:56 12 studies that have shown the effect show the magnitude of  
14:13:00 13 the effect in -- of the ETS-exposed situation to be  
14:13:07 14 equivalent to that of active smoking. And that just does  
14:13:11 15 not compute in a dosimetric sense.  
14:13:16 16 The level of exposure to ETS is so much less  
14:13:20 17 in active smoking that a 200-gram decrement to an ETS  
14:13:24 18 exposed mother does not seem to make any biologically  
14:13:28 19 plausible sense to me.  
14:13:29 20 Q Is there any study that has addressed that?  
14:13:35 21 MR. STONE: Objection; vague and ambiguous.  
14:13:38 22 THE WITNESS: I don't know how one could  
14:13:39 23 address that issue. The way they explain it away, to my  
14:13:45 24 mind, is really scientifically unsound.  
14:13:48 25 BY MR. HULBURT:  
14:13:48 26 Q Is it possible that the level of exposure  
14:13:50 27 necessary to cause a 200-gram decrement is equivalent to  
14:13:55 28 the ETS exposure?  
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14:13:56 1 MR. STONE: Objection; calls for  
14:13:57 2 speculation.  
14:13:59 3 THE WITNESS: I suppose if a child was -- a  
14:14:01 4 mother was exposed to the smoke, the mother was in a  
14:14:05 5 closed room, and the level of her nicotine would get up to  
14:14:09 6 an active smoking so that the level of nicotine in  
14:14:12 7 carboxyhemoglobin in the fetus would be equivalent to  
14:14:16 8 that, one could see that scenario. But that is not a

14:14:18 9 realistic situation at all.  
14:14:20 10 BY MR. HULBURT:  
14:14:20 11 Q Is it the nicotine that causes the low birth  
14:14:22 12 weight?  
14:14:22 13 MR. STONE: Objection; lacks foundation.  
14:14:26 14 THE WITNESS: The effect of the  
14:14:29 15 smoking-related -- the mechanism which attributes active  
14:14:34 16 smoking to low birth weight in offspring is speculative.  
14:14:41 17 To the best of my knowledge, the two most prevailing  
14:14:46 18 hypotheses relate, one to nicotine and its  
14:14:50 19 vasoconstrictive actions on placental blood flow. Another  
14:14:56 20 possibility is the effect that the carboxyhemoglobin  
14:15:02 21 buildup in the active smoker, which actually also will be  
14:15:05 22 the same in the fetus, produces a relative hypoxia, and  
14:15:11 23 those can affect growth.  
14:15:12 24 But what determines a growth retardation in  
14:15:20 25 utero is still subject to a lot of hypotheses in terms of  
14:15:24 26 what's transpiring.  
14:15:25 27 BY MR. HULBURT:  
14:15:25 28 Q All right. Let me go back to the  
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14:15:27 1 confounders.  
14:15:28 2 Can you call something a confounding variable  
14:15:30 3 without empirical evidence that that factor actually  
14:15:34 4 produces some effect?  
14:15:35 5 A I think one has a -- it's appropriate to  
14:15:38 6 consider it a potential confounder, and it should be  
14:15:44 7 addressed in the design of the study. And the reason I  
14:15:48 8 say that is that sometimes there are things that are shown  
14:15:52 9 to be -- to have a statistical association in one study,  
14:15:58 10 and they may not be shown to have a statistical situation  
14:16:01 11 in another study. And the reason that there is  
14:16:05 12 inconsistency there may well be inherent in the design of  
14:16:09 13 the study in what is defined as a confounder and what is  
14:16:14 14 the endpoint that is being looked at.  
14:16:16 15 In the area of ETS or parental smoking, I  
14:16:23 16 think one area that has been not addressed appropriately,  
14:16:28 17 although it's been addressed frequently, are things  
14:16:30 18 related to socioeconomic conditions. People of low income  
14:16:39 19 generally have less medical care, less prenatal medical  
14:16:47 20 care. Their diets may not be the best diets in the  
14:16:50 21 world. There may be a history of alcohol or substance  
14:16:56 22 abuse. And people who are of lower income may live in  
14:17:02 23 communities where the quality of air is not the same, if  
14:17:04 24 they happen to live in industrial communities. I think  
14:17:07 25 these things have to be in some way factored in and  
14:17:12 26 addressed.  
14:17:13 27 And if you look at the literature as I've  
14:17:15 28 looked at the literature, I think these issues have been  
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14:17:18 1 paid more lip service than addressed at all.  
14:17:21 2 Q Doesn't the scientific standards or ethics or  
14:17:29 3 guidelines require that if you're going to put something  
14:17:32 4 out as a potential confounder, there has to be some  
14:17:35 5 evidence to support that as a confounder?  
14:17:37 6 MR. STONE: Objection; asked and answered,  
14:17:39 7 argumentative, compound, and vague and ambiguous as  
14:17:44 8 phrased.  
14:17:45 9 THE WITNESS: I don't know. As a matter of  
14:17:47 10 fact, I don't think it's even an ethical issue at all. I  
14:17:50 11 think it's more of an issue of being scientifically  
14:17:54 12 thorough. There are things that you may ignore because  
14:18:00 13 there's no evidence there, that intuitively are worth at

14:18:04 14 least addressing.

14:18:05 15 In our analysis, for example, of the ETS

14:18:09 16 literature, we tended to look at the 20 or so confounders

14:18:14 17 that we addressed and found many that emerged as

14:18:19 18 consistently associated with adverse respiratory health

14:18:24 19 effects in offsprings in both groups.

14:18:27 20 Among these are family history of disease.

14:18:34 21 Another one is personal history disease. In some

14:18:39 22 situations, it was -- there wasn't much data on it. One

14:18:42 23 that we call stress. Two or three, maybe four papers

14:18:48 24 looked at the issue of stress.

14:18:48 25 So I don't think by excluding -- by not

14:18:51 26 considering them because there's not a precedent, means

14:18:55 27 that you should ignore them completely.

14:18:58 28 BY MR. HULBURT:

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14:18:59 1 Q Is there any study that you could find that

14:19:01 2 you couldn't throw an extra confounder at and say, well,

14:19:04 3 you didn't study for that confounder?

14:19:06 4 MR. STONE: Objection; argumentative.

14:19:07 5 BY MR. HULBURT:

14:19:07 6 Q I mean, I'm saying that sort of facetiously,

14:19:11 7 but sort of real. It seems like anybody could look at any

14:19:13 8 study and say, well, you missed a confounder. Let me give

14:19:18 9 you a few that you should have considered.

14:19:19 10 MR. STONE: Objection; still sort of

14:19:21 11 argumentative and calls for speculation. Improper as to

14:19:24 12 form.

14:19:24 13 You can respond if you want.

14:19:27 14 THE WITNESS: I guess your argument has some

14:19:29 15 foundation in that regard. One could -- but there are

14:19:32 16 important ones that should be addressed.

14:19:33 17 BY MR. HULBURT:

14:19:33 18 Q Well, so how does good science prevent what

14:19:36 19 I'm describing from happening? How does good science

14:19:40 20 prevent just throwing confounding variables at every study

14:19:44 21 to say your study is no good because you didn't consider

14:19:47 22 this, this, and this?

14:19:48 23 A As a matter of fact, I don't address it that

14:19:50 24 way. I look at the totality of the literature, and my

14:19:52 25 concern goes beyond the issue of confounding variables,

14:19:56 26 per se. There are a lot of other issues involved. It's

14:20:00 27 the judgment that an increased relative risk that is not

14:20:04 28 statistically significant is evidence of an association.

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14:20:07 1 Q Let me stop you.

14:20:09 2 A Okay.

14:20:09 3 Q I know you're not finished, but I want you to

14:20:12 4 answer my question.

14:20:12 5 How does good science prevent the improper or

14:20:16 6 unfair attack of untested confounders on a study?

14:20:21 7 A Can I challenge your point, with all due

14:20:24 8 respect, because I think the way you're phrasing it is as

14:20:27 9 though it's a hasty attempt at negating papers. I don't

14:20:30 10 view it that way at all.

14:20:32 11 I think when you look at the totality of the

14:20:34 12 literature, there are mechanisms that should be addressed

14:20:37 13 that have not been addressed. I think one in particular

14:20:41 14 that comes to mind is smoking during pregnancy. It has

14:20:46 15 been looked at or addressed in 13 percent of the studies

14:20:50 16 in preschool. Over 87 percent of the studies. And on the

14:20:57 17 few occasions that it's been looked at, when you factor in

14:21:00 18 smoking during pregnancy, much of the association is

14:21:03 19 diminished, if not obliterated.

14:21:06 20 So I think one should perhaps go back to the

14:21:10 21 drawing board in terms of confounders and come up with a

14:21:13 22 standardized set of confounding variables that address the

14:21:19 23 major ones. I think there's a way of doing it. One has

14:21:23 24 to really maybe redefine some of the studies.

14:21:27 25 MR. HULBURT: All right. I move to strike as

14:21:29 26 nonresponsive.

14:21:30 27 BY MR. HULBURT:

14:21:30 28 Q I want to go back to the question. I'm not  
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14:21:32 1 talking specifically now about the confounders that you've

14:21:34 2 identified in any studies.

14:21:35 3 A Yes.

14:21:35 4 Q I'm really trying to understand from the pure

14:21:38 5 science perspective, how does good science prevent the --

14:21:42 6 I'm going to use the words unfair or inappropriate

14:21:45 7 attachment of confounding variables to a study.

14:21:49 8 How does science know whether that's a

14:21:51 9 confounding variables that really should be considered or

14:21:54 10 whether it's just something thrown out unfairly?

14:21:57 11 MR. STONE: Objection; beyond the area on

14:21:59 12 which this witness has been designated to testify, calls

14:22:02 13 for speculation, and is overbroad and vague and ambiguous.

14:22:04 14 You can try to answer the question.

14:22:06 15 THE WITNESS: I don't -- I don't -- I don't

14:22:08 16 know how one would answer it any more than I've answered

14:22:11 17 it for you.

14:22:11 18 BY MR. HULBURT:

14:22:11 19 Q Are there any accepted scientific standards

14:22:15 20 by which to evaluate whether a proposed confounding

14:22:20 21 variable is really something that should be considered or

14:22:23 22 not?

14:22:23 23 A To the best of my knowledge, of my

14:22:28 24 examination of the literature and, in fact, it's something

14:22:32 25 I've stated in my writings, there seems to be a lack of

14:22:35 26 standardization.

14:22:36 27 The confounding variables, in particular,

14:22:39 28 are -- there's no standardization in terms of what is  
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14:22:41 1 defined as a confounding variable.

14:22:44 2 Q Do you agree that on this subject of ETS, the

14:23:22 3 potentially unlimited number of confounders is a very

14:23:27 4 effective tool to keep the controversy alive?

14:23:31 5 MR. STONE: Objection; assumes facts not in

14:23:32 6 evidence, lacks foundation, is vague and ambiguous,

14:23:35 7 outside the area on which this witness has been designated

14:23:39 8 to testify, argumentative.

14:23:41 9 THE WITNESS: I've never viewed it that way.

14:23:44 10 That has not been my purpose since I have been addressing

14:23:48 11 a variety of confounders. That was not my intention at

14:23:51 12 all.

14:23:52 13 BY MR. HULBURT:

14:23:52 14 Q Is that the effect?

14:23:55 15 MR. STONE: Same objections.

14:23:56 16 BY MR. HULBURT:

14:23:56 17 Q Whether it's your intention or not, is that

14:23:59 18 the effect?

14:24:00 19 MR. STONE: Same objections.

14:24:01 20 THE WITNESS: I couldn't answer that question.

14:24:02 21 BY MR. HULBURT:

14:24:02 22 Q In 1992, you published, with Ronald Hood and

14:24:12 23 Joseph Wu and Philip Witorsch, "Environmental tobacco



14:24:17 24 smoke exposure and respiratory health in children: An  
14:24:20 25 updated critical review and analysis of the  
14:24:22 26 epidemiological literature," correct?  
14:24:24 27 A Yes.  
14:24:25 28 Q Was that the first -- was that your first  
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14:24:28 1 publication on ETS?  
14:24:29 2 A I don't think so. I think I had published  
14:24:32 3 other papers prior to that. I think in 1989, I published  
14:24:41 4 an article -- may I look in my C.V.?  
14:24:44 5 Q Yeah.  
14:24:45 6 A Okay. In 1989 --  
14:24:46 7 Q As I ask the question now, I'm thinking it  
14:24:49 8 must have at least been the second, because this is called  
14:24:52 9 an updated review.  
14:24:53 10 A Well, we have -- I published a few papers  
14:24:57 11 prior to that time. Let me just -- okay.  
14:25:38 12 Q Page 11.  
14:25:39 13 A Page 11, the Witorsch and Witorsch in the  
14:25:43 14 Zeitschrift fur Das Offentliche Gesundheitswesen. The  
14:25:49 15 article was, I think, published in English, but the  
14:25:51 16 abstract was in German. And that was an article that was  
14:25:54 17 looking at the parental smoking and pulmonary  
14:25:57 18 performance. I was looking at spirometry results, where  
14:26:01 19 when I looked at them, I saw that there was a lot of  
14:26:04 20 scatter in the results.  
14:26:06 21 And we had presented this at a conference in  
14:26:09 22 1987 in Berlin. And at the meeting, I was approached by  
14:26:14 23 somebody who was on the editorial board of this journal.  
14:26:17 24 I don't even remember who the individual was. And he  
14:26:21 25 asked me to -- if I would be willing to submit this  
14:26:25 26 article for peer review. And so we submitted this article  
14:26:33 27 to this particular journal.  
14:26:36 28 And, as I recall, this article was under  
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14:26:40 1 revision at least one time several times. I think there  
14:26:44 2 was some concern in terms of -- I don't recall  
14:26:51 3 specifically. But there were some revisions.  
14:26:53 4 Q You're talking about the Zeitschrift article?  
14:26:57 5 A Yes.  
14:26:57 6 Q Do you know what that means in English, that  
14:26:59 7 title?  
14:27:00 8 A I thought it meant -- I should know, because  
14:27:08 9 I took German. Okay. So I'm embarrassed about that. But  
14:27:11 10 I believe it refers to something similar to journal. Time  
14:27:16 11 written. So it would be journal of -- I think that's  
14:27:23 12 public health, would be a translation. But I -- I'm not a  
14:27:28 13 linguist, and I was not a good German student. So.  
14:27:32 14 Q All right. On that page 11 of your C.V.,  
14:27:34 15 then, Exhibit 5194, is the article that I was referring to  
14:27:40 16 in 1992, published in Indoor Environment. Right. It's  
14:27:45 17 two articles down?  
14:27:46 18 A Yes.  
14:27:46 19 Q Is that article, then, which is "ETS exposure  
14:27:50 20 and respiratory health in children: An updated critical  
14:27:54 21 review and analysis of the epidemiological literature," is  
14:27:57 22 that an update of the German article?  
14:28:00 23 A I think -- if I'm not mistaken, that article  
14:28:03 24 included some of the functional spirometry data. However,  
14:28:07 25 we have published other articles that appeared in  
14:28:11 26 symposia, as opposed to the peer-reviewed literature, on  
14:28:16 27 the health effects which were previous publications along  
14:28:22 28 the same lines.

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14:28:24 1 So in that regard, we were updating -- I'm  
 14:28:27 2 referring to a paper that we published in a meeting in --  
 14:28:35 3 let me see. In 19- -- that's abstracts. I'm sorry.  
 14:28:49 4 Under the book and/or chapter section. The --  
 14:29:02 5 MR. STONE: Can I point you to the fourth one  
 14:29:06 6 down under books and/or chapters. Look under the  
 14:29:09 7 fourth --  
 14:29:09 8 THE WITNESS: Yes. It's the McGill  
 14:29:12 9 University in 1989 was probably the precursor to that  
 14:29:20 10 updated article.  
 14:29:21 11 BY MR. HULBURT:  
 14:29:25 12 Q That's "Maternal smoking and pulmonary  
 14:29:33 13 performance in children"?  
 14:29:34 14 MR. STONE: No. That's the one I was  
 14:29:35 15 referring to.  
 14:29:38 16 THE WITNESS: It's on page 17 of my C.V.  
 14:29:44 17 It's Witorsch, and it's "Parental" -- that's Witorsch,  
 14:29:48 18 R.J. "Parental smoking and respiratory health and  
 14:29:52 19 pulmonary function in children: A review of the  
 14:29:55 20 literature and suggestions for future research."  
 14:30:00 21 That was a meeting in 1989, and the book was  
 14:30:07 22 published in 1990.  
 14:30:10 23 BY MR. HULBURT:  
 14:30:10 24 Q Who paid for that book?  
 14:30:16 25 A I'm not sure, but I could speculate, I guess.  
 14:30:19 26 Q Tell me your best understanding of who paid  
 14:30:22 27 for that work which resulted in the paper and the book.  
 14:30:28 28 A I was actually invited to submit that article  
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 14:30:35 1 to the symposium by John Rupp. So it would be my  
 14:30:38 2 assumption that somebody related to tobacco sponsored that  
 14:30:43 3 project.  
 14:30:43 4 Q When your article -- the 1992 article  
 14:30:59 5 published in Indoor Environment -- Indoor Environment is a  
 14:31:03 6 journal in Switzerland; is that correct?  
 14:31:06 7 A No. I think the publisher, which is  
 14:31:18 8 S. Karger, might be a Swiss firm. I qualify that. I'm  
 14:31:21 9 not sure.  
 14:31:22 10 I believe the major editorial office is in  
 14:31:27 11 the UK somewhere. I'm not sure offhand.  
 14:31:29 12 Q All right. When you publish an article in  
 14:31:35 13 Indoor Environment, do you write the abstract for the  
 14:31:38 14 article, or does somebody else write the abstract?  
 14:31:40 15 A No. I write the abstract.  
 14:31:41 16 Q Is that traditional? You submit your paper  
 14:31:44 17 and you submit the abstract with it?  
 14:31:45 18 A The abstract should be written by the author,  
 14:31:48 19 yes, in every paper.  
 14:31:49 20 Q Okay. And have any of the tobacco industry  
 14:31:53 21 lawyers participated in writing the abstract for any of  
 14:31:56 22 your papers?  
 14:31:57 23 A Not that I know of. I don't -- I don't think  
 14:32:03 24 so. I hope not.  
 14:32:05 25 Q The first sentence of the abstract on your  
 14:32:10 26 1992 article, "Environmental tobacco smoke exposure and  
 14:32:14 27 respiratory health in children," the first sentence is the  
 14:32:17 28 issue of environmental tobacco smoke exposure of children  
 Vail, Christians & Associates (619)544-8344 141  
 14:32:21 1 and respiratory health effects remains a matter of  
 14:32:24 2 considerable controversy. Let me go on. We undertook to  
 14:32:29 3 conduct a comprehensive and updated critical review and  
 14:32:33 4 objective analysis of the epidemiological literature

14:32:36 5 relevant to possible associations between ETS exposure and  
14:32:40 6 respiratory health of children?

14:32:42 7 Let me ask you specifically --

14:32:44 8 MR. STONE: Do you have a page number or a  
14:32:46 9 production number on that so that I can give the witness a  
14:32:49 10 copy of it to look at?

14:32:51 11 MR. HULBURT: The number I have is  
14:32:53 12 508131325. You know, which is not from your production of  
14:33:02 13 records on Friday.

14:33:03 14 MR. STONE: Do you have a copy of one the  
14:33:06 15 witness could look at?

14:33:07 16 BY MR. HULBURT:

14:33:07 17 Q Did you produce that article in this case,  
14:33:14 18 Dr. Witorsch?

14:33:15 19 A No. Because I didn't refer to it, because it  
14:33:20 20 was an early manuscript.

14:33:22 21 Maybe I did a cover page. I'm not sure. I  
14:33:29 22 don't think so.

14:33:29 23 Q Well. The question is did any of the lawyers  
14:33:55 24 at Covington & Burling participate in writing those two  
14:34:00 25 sentences that I read to you?

14:34:04 26 A No.

14:34:04 27 Q Do you agree that those two sentences sound  
14:34:11 28 exactly like what Sharon Boyse wrote as the Philip Morris  
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14:34:17 1 global strategy with respect to ETS?

14:34:19 2 MR. STONE: Objection; lacks foundation,  
14:34:22 3 outside his area of expertise, properly a subject for the  
14:34:27 4 trier of fact as to whether something sounds exactly like  
14:34:30 5 something else, if that's an issue in this case. Calls  
14:34:33 6 for speculation, lacks foundation in that neither document  
14:34:36 7 has been presented to the witness for his review.

14:34:39 8 You can answer if you can.

14:34:44 9 THE WITNESS: My only response to that is if  
14:34:48 10 what Sharon wrote in that document -- I don't even know  
14:34:51 11 what year it was -- sounds the same, it's a matter of  
14:34:53 12 coincidence. And I think there are probably a limited  
14:34:56 13 number of ways you can phrase that in a sentence. So the  
14:35:00 14 fact that it's a matter of controversy is -- doesn't  
14:35:04 15 surprise me. I don't think there's an issue of plagiarism  
14:35:07 16 or ghost writing in that concern.

14:35:09 17 BY MR. HULBURT:

14:35:09 18 Q What is the -- I thought I saw in your C.V.  
14:35:34 19 some sort of working group or some group that is part of  
14:35:40 20 the CEHHT, of which you're a member.

14:35:52 21 Are you part of some Indoor Air Quality Group  
14:35:54 22 or something like that?

14:35:55 23 Indoor Air Pollution Advisory Group for the  
14:35:57 24 Center for Environmental Health and Human Toxicology,  
14:36:01 25 what is that?

14:36:02 26 A Where is that located on the C.V.?

14:36:05 27 Q Page 5, the fourth item down, invited  
14:36:08 28 speaker. It might be elsewhere, but that's one place  
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14:36:12 1 where I found it.

14:36:13 2 A Association for research on indoor -- oh.  
14:36:21 3 Wait a second. Let's see. Which one is it? How many --

14:36:26 4 Q On page 5 of your C.V., Exhibit 5194 --

14:36:31 5 A Okay.

14:36:32 6 Q -- four items down.

14:36:34 7 A Yes. When I -- this is a very early on in  
14:36:40 8 the issue, when I got involved in the ETS issue, I was  
14:36:46 9 invited up to Washington. There were meetings with

14:36:50 10 scientists and John Rupp. And, basically, we talked about  
14:36:56 11 the science of ETS, and if I'm not mistaken, those  
14:37:03 12 meetings from time to time were at Covington & Burling.  
14:37:07 13 And at one point in that time, I was asked to give a  
14:37:13 14 presentation. I thought it was a consulting-related work  
14:37:17 15 on an area of scholarly -- scholarly issue that I was  
14:37:21 16 involved in.

14:37:22 17 Q What is the Indoor Air Pollution Advisory  
14:37:25 18 Group?

14:37:25 19 A It's been a long time, but I assume it was a  
14:37:28 20 group of scientists that were advising the tobacco  
14:37:32 21 industry on the science of ETS.

14:37:36 22 Q Is that group no longer in existence at CEHHT?

14:37:41 23 A To my knowledge, it is not, no longer in  
14:37:44 24 existence.

14:37:44 25 Q When was it in existence?

14:37:45 26 A Well, I -- I would say in the late eighties  
14:37:48 27 and probably no longer in existence by 1990 or so.

14:37:53 28 Q Was your brother part of that group?  
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14:37:56 1 A Yes.

14:37:56 2 Q Who else besides you and your brother?

14:37:59 3 A It's been so long, I don't recall all the  
14:38:01 4 people, but I think that's where I met Mark Reasor, for  
14:38:07 5 example. I really don't remember the individuals.

14:38:15 6 Q Did the Indoor Air Pollution Advisory Group  
14:38:17 7 for the Center for Environmental Health on Human  
14:38:20 8 Toxicology do anything other than consult with tobacco  
14:38:25 9 companies?

14:38:25 10 A The individuals involved did other  
14:38:27 11 consulting, I am sure, as my brother did other consulting  
14:38:31 12 on other issues, as I did. But as a group on Indoor Air  
14:38:35 13 Advisory, I would assume that they worked with the tobacco  
14:38:39 14 industry on that.

14:38:40 15 Q Do you know what the ETS working group of the  
14:38:47 16 Tobacco Manufacturers' Association is?

14:38:50 17 A Not offhand.

14:38:51 18 Q Is that something you've had any contact with?

14:38:54 19 A I don't recall that name at all. That's not  
14:39:04 20 to say I haven't had contact, I just don't recall that  
14:39:09 21 name.

14:39:09 22 Q Let me show you what I'll mark as Exhibit  
14:39:11 23 5195, which is a Tobacco Manufacturers' Association,  
14:39:15 24 Industry Issues Dossier, document No. 2502284483 and 84.  
14:39:26 25 (Exhibit 5195 was marked for  
14:39:30 26 identification.)  
14:39:30 27 BY MR. HULBURT:

14:39:30 28 Q I really want to know if you've seen  
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14:39:33 1 documents like that before, if you're familiar with this  
14:39:36 2 format of Industry Issues Dossier.

14:40:05 3 A No, I have not seen this before. And -- no,  
14:40:10 4 I have not seen this before.

14:40:11 5 Q Have you seen documents like this, I mean,  
14:40:19 6 this idea of a Tobacco Manufacturers' Association,  
14:40:22 7 Industry Issues Dossier?

14:40:24 8 MR. STONE: Objection; vague and ambiguous  
14:40:26 9 with respect to the use of the phrase "document like  
14:40:29 10 this." Lacks foundation.

14:40:30 11 You can answer as best you can.

14:40:32 12 THE WITNESS: I haven't seen any -- anything  
14:40:34 13 like this. I would remember, because I'm flattered if I'm  
14:40:42 14 cited. I don't recall that.

14:40:43 15 BY MR. HULBURT:

14:40:43 16 Q Were you aware that your work is being used

14:40:48 17 by the Tobacco Manufacturers' Association to publish

14:40:53 18 Industry Issues Dossiers or little white pages or little

14:40:58 19 position statements like this?

14:41:00 20 A I haven't been aware of it. In all honesty,

14:41:04 21 I'm not troubled by it as long as it was an accurate

14:41:07 22 assessment of what I did. My work is public domain once I

14:41:22 23 get it published, and I think anyone has the prerogative

14:41:25 24 of doing -- of presenting those issues.

14:41:27 25 Q You have a website; is that right?

14:41:31 26 A I have a website, yes.

14:41:33 27 Q And what's the purpose of your website?

14:41:36 28 A The purpose of my website -- well, I have two  
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14:41:40 1 websites, as a matter of fact. I have one which is my

14:41:45 2 academic website, which is within the university. And

14:41:51 3 then I have one linked up to under -- the most recent one

14:41:58 4 is Witorsch dot com. Is that the one you have there?

14:42:01 5 Because at one point it was on Erols. What does it say?

14:42:07 6 Q The one I have is Erols, E-r-o-l-s, dot com.

14:42:10 7 A Okay. That one is basically the same, but a

14:42:13 8 little out of date in terms of the current one that I

14:42:16 9 have, which is in Witorsch dot com. My son is my

14:42:20 10 webmaster.

14:42:23 11 My son incorporated our family name, and he

14:42:29 12 uses it to post his personal stuff, some of his interests,

14:42:34 13 because he's in human resources. And I have a website

14:42:41 14 that is my nonacademic website that talks about my

14:42:46 15 scholarly and consulting credentials. And the primary

14:42:51 16 purpose of that is a means of eventually marketing my

14:42:56 17 activities as a consulting in general areas. It's my

14:43:01 18 attempt at increasing my business activities. To give me

14:43:09 19 visibility in areas as related to toxicology in general.

14:43:18 20 Q You have a mission statement on the Erols dot

14:43:27 21 com?

14:43:27 22 A Yeah. It's the same one as the one I think,

14:43:30 23 to provide the client with an honest appraisal, et cetera,

14:43:33 24 et cetera, et cetera, yes.

14:43:34 25 Q It says to provide an objective view of

14:43:37 26 controversial human toxicology issues using an ethical and

14:43:41 27 responsible approach to the science and statistics

14:43:44 28 involved?

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14:43:44 1 A That's right.

14:43:45 2 Q That's your mission statement?

14:43:46 3 A That's -- yes.

14:43:47 4 Q When did you develop that?

14:43:50 5 A The mission statement?

14:43:51 6 Q Yeah.

14:43:51 7 A The mission statement was developed around

14:43:54 8 the time that that page was developed. I would say about

14:43:59 9 two years ago. And it was really developed on the

14:44:04 10 recommendation of my son, who is a business school

14:44:08 11 graduate. And said, you know, dad, you need a mission

14:44:12 12 statement on your web page. So he said to me what do you

14:44:20 13 feel are -- what are you most comfortable with. So that's

14:44:23 14 how that mission statement was drafted.

14:44:24 15 Q Who wrote the mission statement?

14:44:26 16 A I think we both drafted it. I don't recall

14:44:29 17 specifically. I wouldn't want to deprive my son of

14:44:33 18 priority, but he certainly helped me with it. He had

14:44:37 19 expertise in that area.

14:44:38 20 Q Is this mission statement an effort by you to  
14:44:47 21 describe what good science really is?

14:44:50 22 A Well, I think the mission -- the purpose of  
14:44:55 23 the mission statement is to tell the potential client what  
14:44:59 24 type of service I will provide, and the purpose of the web  
14:45:05 25 page is to -- by the way, the picture there is way out of  
14:45:09 26 date. I wish I looked as good now. And in the newer one,  
14:45:12 27 the picture is updated.

14:45:15 28 And the purpose there is to increase my  
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visibility in terms of generating potential clients.

14:45:20 1 Q I understand that.

14:45:25 2 But is this statement, this mission  
14:45:27 3 statement, some statement by you of what you believe a  
14:45:29 4 good scientist does?

14:45:31 5 A Well, that's -- yes. That's what a good  
14:45:33 6 scientist should do, and I think that's what has guided me  
14:45:36 7 through all of this work.

14:45:40 8 Q Let me show you what I'll mark as Exhibit  
14:45:51 9 5196, which is document No. 2044748272 through 8288.  
14:45:53 10 It's, I guess, in part, entitled "Youth Issues."  
14:46:14 11 (Exhibit 5196 was marked for identification.)  
14:46:18 12 BY MR. HULBURT:  
14:46:21 13 Q So I guess the first question is have you  
14:46:21 14 ever seen that or any part of that? You'll notice that --  
14:46:26 15 MR. STONE: Let me look at it for a second.  
14:46:30 16 BY MR. HULBURT:  
14:46:32 17 Q -- it refers to page 14 on the subject of  
14:46:32 18 environmental tobacco smoke, which, obviously, is the area  
14:46:35 19 that I'm most interested in.  
14:46:38 20 This looks to be some sort of document from  
14:46:39 21 Philip Morris related to how to respond to certain  
14:46:54 22 potential health issues -- or certain questions. Some  
14:47:00 23 health issues, some not.  
14:47:05 24 MR. STONE: I think the question -- the  
14:47:06 25 pending question is has he seen it before?  
14:47:07 26 BY MR. HULBURT:  
14:47:09 27 Q Yeah.  
14:47:09 28 Vail, Christians & Associates (619)544-8344 149  
14:47:10 1 Are you familiar with this? Have you seen  
14:47:12 2 it?

14:47:12 3 A I haven't seen it before.

14:47:13 4 Q On page 14 is the reference to health and  
14:47:19 5 environmental tobacco smoke, and page 15. It continues.

14:47:31 6 A I see my name there, yes.

14:47:41 7 Q On page 15, it talks about "An analysis of 41  
14:47:49 8 studies cited 21 separate confounding factors that were  
14:47:54 9 not accounted for in a majority of the studies," cites to  
14:47:58 10 you and your brother's work there.

14:48:00 11 That's, of course, part of the work that  
14:48:02 12 you've been talking about here today, right?

14:48:04 13 A Okay.

14:48:04 14 Q And then it goes on to say and quotes you, I  
14:48:09 15 guess, "An analysis concluded," quote, "'Before  
14:48:12 16 epidemiological associations between parental smoking and  
14:48:17 17 respiratory health in preschool children can be concluded  
14:48:19 18 to reflect any effect of ETS on the respiratory system of  
14:48:23 19 these children, it will be necessary to more thoroughly  
14:48:25 20 and more consistently consider the role of a number of  
14:48:28 21 potentially confounding variables, both individually and  
14:48:31 22 in combination,'" end quote, parentheses, "Analysis was  
14:48:34 23 supported, in part, by The Tobacco Institute," close  
14:48:37 24 paren.

14:48:39 25 Now, is that a quote out of one of your  
14:48:42 26 articles?  
14:48:42 27 MR. STONE: Objection; lacks foundation,  
14:48:43 28 calls for speculation. The documents speak for  
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14:48:46 1 themselves.  
14:48:47 2 You can answer as best you can recall.  
14:48:49 3 THE WITNESS: I don't know specifically, but  
14:48:50 4 it would be something that I would be comfortable saying.  
14:48:52 5 BY MR. HULBURT:  
14:48:52 6 Q All right. It sounds like something you  
14:48:55 7 maybe have said?  
14:48:55 8 A Yes.  
14:48:56 9 Q Okay. But you have not done any of that  
14:48:59 10 work, though, that you say "it will be necessary to more  
14:49:02 11 thoroughly and more consistently consider the role of a  
14:49:05 12 number of potential confounding variables"? You've not  
14:49:08 13 done that, have you?  
14:49:09 14 A No.  
14:49:09 15 Q And you're not aware that anybody working in  
14:49:13 16 or on behalf of the tobacco industry has done that?  
14:49:16 17 A No.  
14:49:17 18 Q And you've not recommended that anybody in  
14:49:21 19 the tobacco industry do that?  
14:49:23 20 A No.  
14:49:24 21 Q Why not?  
14:49:26 22 A I think I've answered that question already.  
14:49:29 23 I don't regard my job as a person to just make  
14:49:39 24 recommendations. My activities are to provide an analysis  
14:49:43 25 of and interpretation of the data. I'm not involved in  
14:49:47 26 policy making, and to be very frank, I -- as you can tell  
14:49:52 27 from my resume, I have a lot on my plate, and I don't  
14:49:56 28 consider that in my regard a priority of my activities.  
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14:50:04 1 VIDEOGRAPHER: Counsel.  
14:50:05 2 MR. HULBURT: Yeah. Let's go off the  
14:50:06 3 record.  
14:50:07 4 VIDEOGRAPHER: This concludes Tape 2 in the  
14:50:09 5 videotaped deposition of Raphael Witorsch. Off the record  
14:50:12 6 at 2:50 p.m.  
14:50:14 7 (Recess.)  
15:15:30 8 VIDEOGRAPHER: This begins Tape 3 in the  
15:19:21 9 videotaped deposition of Raphael Witorsch. On the record  
15:19:21 10 at 3:19 p.m.  
15:19:21 11 MR. HULBURT: I marked as Exhibit 5197, the  
15:19:22 12 notes that we discussed earlier related to your review  
15:19:22 13 from the declarations of Joe Pinkerton and Slotkin. So  
15:19:25 14 we'll just attach those as an exhibit.  
15:19:27 15 I also want to mark as Exhibit 5198, the  
15:19:32 16 packet of records that I received here this morning that I  
15:19:44 17 guess is as a result of a letter dated July 21st, 2000,  
15:19:48 18 from Mr. Stone to Mr. McGuire, faxed and Federal  
15:19:53 19 Expressed. And then I guess faxed over to Mr. Stone here  
15:20:00 20 today, and then he handed them to me.  
15:20:02 21 MR. STONE: No. Those were faxed to your  
15:20:04 22 office on the 21st. I didn't give you those today. Those  
15:20:09 23 were faxed to you here by your office.  
15:20:12 24 MR. HULBURT: You're right. You're right.  
15:20:14 25 Somebody -- it was faxed to me here. That's right. It  
15:20:17 26 has a cover page that says please deliver to Chris Hulburt  
15:20:22 27 upon receipt.  
15:20:22 28 And attached to these are documents  
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15:20:28 1 P65RJW000443 through 449, which is apparently a fax from  
15:20:38 2 you to Mr. Stone, enclosing, number one, a short form of  
15:20:47 3 my opinions, two pages; and, number two, a long form of my  
15:20:51 4 opinions, draft, four pages.  
15:20:52 5 MR. STONE: So when you mark that one,  
15:20:55 6 Mr. Hulburt, which is -- what is the document going to  
15:20:58 7 consist of?  
15:20:58 8 MR. HULBURT: 5198.  
15:21:00 9 MR. STONE: Are you going to pull off your  
15:21:02 10 fax cover sheet, the one to you from your office? I just  
15:21:05 11 wanted to know where you're going to start.  
15:21:06 12 MR. HULBURT: Let's start with your cover  
15:21:08 13 letter.  
15:21:08 14 MR. STONE: My letter to Mr. McGuire?  
15:21:10 15 MR. HULBURT: Yes. Which also has  
15:21:12 16 handwritten on it, "Try to get this to Chris Hulburt." I  
15:21:16 17 don't know whose handwriting that is.  
15:21:17 18 MR. STONE: Not mine.  
15:21:18 19 Do you want to leave that on the exhibit? I  
15:21:21 20 don't care. I just want to conform mine. Or do you want  
15:21:24 21 to just go with his fax cover sheet? It's up to you.  
15:21:28 22 MR. HULBURT: This is all I have. So it  
15:21:29 23 doesn't matter to me. I don't care. I don't care.  
15:21:31 24 MR. STONE: All right.  
15:21:32 25 MR. HULBURT: I mean, what I'm interested in  
15:21:34 26 are the pages that originated from you with these short  
15:21:40 27 and long forms of the opinions, I guess.  
15:21:42 28 BY MR. HULBURT:  
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15:21:45 1 Q Tell me, other than what it says here, on  
15:21:48 2 your cover page, tell me what are these? What do they  
15:21:50 3 represent? What's your purpose there?  
15:21:51 4 (Exhibit 5197 and 5198 were marked for  
15:21:57 5 identification.)  
15:21:57 6 THE WITNESS: Yes. At an earlier meeting  
15:22:04 7 with Mr. Cafferty -- let me see if I remember this  
15:22:10 8 correctly. Excuse me.  
15:22:11 9 This came from a phone call that we had on  
15:22:18 10 July the 17th. It was a conference call that involved  
15:22:22 11 Mr. Cafferty, myself, Clausen Ely, who was at the UK at  
15:22:33 12 the time, and an associate in Clausen Ely's office. And  
15:22:38 13 we were discussing the deposition, what would be expected  
15:22:42 14 of me, my views on science.  
15:22:44 15 And one of the recommendations that Pat made  
15:22:47 16 of me is you ought to take your opinions and try to  
15:22:53 17 condense them in your -- into an abstract form because it  
15:22:59 18 would help in your conveying that information at the  
15:23:03 19 deposition. And it will sort of crystallize your  
15:23:07 20 thoughts. And as a recommendation, he said about a page.  
15:23:12 21 And there were three issues that I was dealing with.  
15:23:14 22 So I initially started to just commit my  
15:23:18 23 thoughts to paper. And what I originally thought was  
15:23:22 24 going to be a page or two-page or a one-page document  
15:23:26 25 turned out to be this four-page document.  
15:23:28 26 Being cognizant of the fact, by now, that  
15:23:31 27 these things should be turned over, I decided to keep this  
15:23:34 28 as the prototype, and from larger one, which has more  
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15:23:38 1 detail, I compressed into one and a half pages. That was  
15:23:43 2 about the best that I could do in the time concern.  
15:23:45 3 So the top document, which is two pages, is  
15:23:51 4 the more condensed version of my opinions. And the four  
15:23:56 5 pages adds more detail that I felt would be, for purposes



15:24:03 6 of an abstract, diffuse, but something we could refer to  
15:24:06 7 if we had to.  
15:24:07 8 BY MR. HULBURT:  
15:24:07 9 Q The four pages were written first, then?  
15:24:09 10 A The four pages were written first, and then I  
15:24:11 11 compressed it down.  
15:24:12 12 Q When? When did you do the four pages?  
15:24:15 13 A Well, it was sometime between July 17th and  
15:24:21 14 July the 20th when we -- when I met with Mr. Cafferty at  
15:24:31 15 Hunton Williams in Richmond, in the afternoon. So it was  
15:24:34 16 over that three-day period.  
15:24:39 17 Q The same for both?  
15:24:40 18 A Yeah. It was the start of the standard one,  
15:24:45 19 and then I said this is much too long and much too  
15:24:49 20 detailed for those purposes, and then I compressed it  
15:24:52 21 down.  
15:24:52 22 Q Were there any revisions of your summaries  
15:24:54 23 that were suggested by any of the attorneys?  
15:24:58 24 A No. I tell you what, there is a couple of  
15:25:01 25 things that when Pat looked at them, he picked up a couple  
15:25:05 26 of mistakes in my document. And those are the ones that I  
15:25:10 27 hand corrected. And that's on page -- in the summary  
15:25:16 28 document, I put the greater than in the wrong direction,  
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15:25:18 1 and I meant to say increased incident. And I wrote  
15:25:24 2 decreased. And as I was talking, he said are you sure  
15:25:29 3 this is what you mean? And I said, oh, my God, I made a  
15:25:31 4 mistake. And he pointed that out to me. So it was an  
15:25:35 5 error that he called to my attention.  
15:25:37 6 Q Typos?  
15:25:38 7 A Typos. Well, they were typos, but they were  
15:25:42 8 like unintentional errors. I meant to write something  
15:25:46 9 else.  
15:25:47 10 Q The same thing on page 2 of the four-page  
15:25:59 11 version?  
15:26:00 12 A Let me see.  
15:26:01 13 Q You've got a --  
15:26:01 14 A I've got a copy too because it's a -- yes.  
15:26:05 15 Same thing.  
15:26:05 16 Q You got a greater than switched to less than?  
15:26:08 17 A Yeah. That's something that I -- I do very  
15:26:13 18 often.  
15:26:14 19 Q Okay. Have you done all the work that you  
15:26:24 20 believe is necessary in order to testify regarding your  
15:26:28 21 opinions in this case?  
15:26:33 22 A I believe I've done all of the work  
15:26:34 23 necessary. Although, I am -- I would feel obligated if I  
15:26:40 24 were to go to trial, to try to update myself in the  
15:26:43 25 literature with what may have transpired from today until  
15:26:50 26 the time I give my testimony. And if something is called  
15:26:54 27 to my attention, that there may have been an exclusion or  
15:27:02 28 a misinterpretation, which is not beyond the realm of  
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15:27:06 1 possibility because we all make mistakes, I would like to  
15:27:10 2 correct that. And, also, I feel before I go to  
15:27:13 3 testimony -- to testify at a trial, I'd want to review my  
15:27:17 4 material so it's fresh in my mind.  
15:27:19 5 Q Is there any work that you intended to do or  
15:27:22 6 wanted to do but didn't get to do before coming today to  
15:27:26 7 offer your expert opinions in this case?  
15:27:29 8 A Just to review my notes that I gave you. But  
15:27:32 9 I never had a chance to do it. And I figured to go any  
15:27:35 10 further would be beyond the realm of diminishing returns.

15:27:40 11 I decided not to even look at those things.

15:27:43 12 Q What is -- you've been designated, then, to

15:27:49 13 testify regarding the principles of critical evaluation of

15:27:52 14 epidemiological studies.

15:27:55 15 What are your opinions in that regard?

15:27:58 16 A Could you repeat that question. I'm sorry.

15:28:00 17 Q What are your opinions regarding the

15:28:02 18 principles of critical evaluation of epidemiological

15:28:05 19 studies?

15:28:05 20 A Well, in terms of a -- I don't know if it's

15:28:08 21 more of an opinion, but what I'm supposed to describe is

15:28:12 22 how I arrived at my opinion. In fact, what I did to

15:28:19 23 arrive at my opinion regarding the epidemiology in these

15:28:23 24 three areas that I'm going to be testifying in.

15:28:26 25 Q Are there principles of critical evaluation

15:28:30 26 of epidemiological studies?

15:28:33 27 A Well, I -- having looked at epidemiology

15:28:37 28 books, I think they all address certain aspects of -- what  
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15:28:44 1 I mean to describe in there is the way I went about doing

15:28:47 2 it, the fashion.

15:28:47 3 Q Are you an epidemiologist?

15:28:49 4 A I'm not an epidemiologist by trade -- by

15:28:53 5 training.

15:28:53 6 Q All right. So we've probably already talked

15:28:58 7 about it, and I will ask you about it more, about exactly

15:29:01 8 what you've done. But I just want to make sure that I've

15:29:04 9 covered the bases here for what you were designated to

15:29:07 10 testify about.

15:29:07 11 Do you have any opinions about the principles

15:29:10 12 of critical evaluation of epidemiological studies that you

15:29:14 13 intend to offer in testimony in this trial?

15:29:18 14 A I'm not sure I understand what you're asking.

15:29:21 15 Q Yeah. Well, I'm not sure either, beyond just

15:29:25 16 relying on the language of this declaration.

15:29:27 17 A Could I just see what that language is stated

15:29:31 18 and make sure.

15:29:32 19 "Dr. Witorsch will testify regarding" --

15:29:39 20 okay.

15:29:40 21 I remember this was sent to me. This was not

15:29:42 22 written by me. This was written, I assume, by one of the

15:29:47 23 attorneys. But I was asked -- it was sent to me, whether

15:29:51 24 it was accurate. And now I recall.

15:29:52 25 Basically, what I'm going to describe here is

15:29:55 26 how I critically evaluated the epidemiological

15:29:58 27 literature. If you notice, in most of my papers, I say a

15:30:01 28 critical analysis of the literature. It's the way we did  
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15:30:04 1 it. It was one that developed intuitively from deciding

15:30:13 2 how we would go about looking at the literature in a

15:30:17 3 systematic fashion. So it was the approach that my

15:30:23 4 brother and I developed and how we would go about looking

15:30:27 5 at the literature, because there is so much literature

15:30:30 6 that we wanted to come up with some systematic approach.

15:30:34 7 So it's the way that I systematically

15:30:39 8 analyzed the literature.

15:30:40 9 Q Okay. I've asked this question before, but

15:30:43 10 let me do it one more time.

15:30:46 11 In your opinion, are there generally accepted

15:30:48 12 scientific principles of critical evaluation of

15:30:52 13 epidemiological studies?

15:30:53 14 A I think so. I think the criteria -- some of

15:30:58 15 them are just general principles of science. Among them

15:31:03 16 is -- and they -- as a matter of fact, they overlap with  
15:31:07 17 the criterion of causation. They -- the one that I found  
15:31:13 18 most striking when I went into this analysis was the --  
15:31:18 19 pertained to the consistency of an association, whether or  
15:31:22 20 not an observation is reproducible. This has very --  
15:31:29 21 didn't consider at the time the magnitude of the  
15:31:31 22 effect. But in looking at many of the endpoints that I  
15:31:34 23 have been involved in, a significant majority of the  
15:31:38 24 papers failed to establish a statistically significant  
15:31:42 25 association.

15:31:43 26 So consistency of showing a statistically  
15:31:48 27 significant association is one of the principles.

15:31:53 28 As I sort of got involved, it would be how  
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15:31:58 1 valid the interpretation is based on the quality of the  
15:32:03 2 manuscript or the quality of study in terms of  
15:32:07 3 consideration of confounding variables, whether the  
15:32:10 4 interpretation was valid, whether there was a  
15:32:19 5 statistically significant dose-related association, the  
15:32:25 6 frequency of dose response.

15:32:26 7 So the systematic approach upon which I  
15:32:32 8 evaluated the literature.

15:32:34 9 Q That's essentially the same thing you  
15:32:42 10 described earlier, talking about the Cal EPA report, that  
15:32:48 11 you're looking for a significant odds ratio,  
15:32:52 12 reproducibility, and appropriately dealing with  
15:32:55 13 confounders? Is that -- is that -- you're describing the  
15:32:59 14 same thing?

15:33:00 15 A Yeah. But that's going back -- that actually  
15:33:02 16 was, in a nutshell -- I overlapped. I'm sorry. In a  
15:33:05 17 nutshell, that was the conclusion. The way I went about  
15:33:09 18 it is more of an organized approach. We -- as a matter of  
15:33:16 19 fact, we had categorized various items of interest in the  
15:33:21 20 paper. And we went through each paper. We read each  
15:33:25 21 paper thoroughly and extracted the relevant information.

15:33:29 22 I'm looking at my copy of the sheet you have,  
15:33:32 23 just to refresh my memory. These are not all of them, but  
15:33:36 24 these are the various criterion that we looked at  
15:33:41 25 systematically.

15:33:42 26 In fact, I had, at one point in the analysis,  
15:33:44 27 a template where I would include the information. I would  
15:33:49 28 almost do it online, type it up. So I would construct  
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15:33:54 1 tables.

15:33:54 2 For example, I would be interested in  
15:33:57 3 extracting information on the size of the study. That  
15:34:01 4 means the number of individuals concerned and the number  
15:34:05 5 of exposed individuals, how ETS exposure was determined,  
15:34:10 6 because there are a variety of ways.

15:34:12 7 93 percent of the time in the studies, it's  
15:34:16 8 all based on questionnaire responses. Well, sometimes it  
15:34:21 9 was maternal smoking. Sometimes it was parental smoking.  
15:34:26 10 Sometimes it was household smoke. Sometimes it was  
15:34:31 11 exposure out of the home. And if it was determined that  
15:34:36 12 way, whether or not there was a validation of such  
15:34:41 13 exposure by some tobacco smoke marker, such as the level  
15:34:47 14 of cotinine or carboxyhemoglobin in the bodily fluids of  
15:34:54 15 the individual exposed, or in the case of maternal  
15:34:57 16 smoking, what were the levels of cotinine in the smoking  
15:35:00 17 versus nonsmoking mother.

15:35:02 18 So we looked at that criterion.

15:35:06 19 Q Are all of the criteria that you looked for  
15:35:09 20 listed in your notes?

15:35:10 21 A All of the major ones, because there are --  
15:35:12 22 they are listed in the -- my earlier manuscripts that we  
15:35:20 23 have published, the 1993 paper, which we published in  
15:35:25 24 Indoor Environment. I give a description, and we did much  
15:35:28 25 the same approach in the 1996 paper on ETS exposure and  
15:35:35 26 intrauterine growth retardation. We basically used the  
15:35:38 27 same approach in the analysis where we picked out what we  
15:35:42 28 considered were important aspects of the paper.

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15:35:49 1 Q Were there -- this is where we are on this  
15:35:53 2 question.

15:35:53 3 Were there generally accepted scientific  
15:35:56 4 principles that you followed in order to determine what  
15:36:00 5 criteria to use or what factors to evaluate or how to  
15:36:03 6 analyze these articles that you're going to go through?

15:36:07 7 A I don't think there was a Bible that said  
15:36:10 8 this is the way it was done. This was a what we conceived  
15:36:16 9 as a logical way of going about the problem, which I think  
15:36:19 10 is more the rule than the exception to the rule in how  
15:36:23 11 science evolves. There's no talmudic scholar there who  
15:36:28 12 writes this is the way it's done. It's you describe the  
15:36:31 13 way it's being done, and then it is -- it appears in the  
15:36:35 14 literature. Usually the peer review literature, and  
15:36:39 15 somebody might adapt your method or adapt your method, in  
15:36:43 16 essence, with some modification. That's usually the way  
15:36:47 17 it's done.

15:36:47 18 So if I can say principles, it was the  
15:36:51 19 principle of objectivity was adhered to. The principle of  
15:36:56 20 systemization, because we tried to look at every paper in  
15:37:00 21 much the same way to see how much consistency there was.

15:37:03 22 The rationale for doing that, as I reflect,  
15:37:07 23 of why we developed that was a means of trying to explain  
15:37:10 24 why, in some of the analyses we did, we found an  
15:37:15 25 inconsistency. Could we explain these. Not to criticize  
15:37:19 26 the literature as being a weak literature, but to explain  
15:37:23 27 why it was some degree of inconsistency in the database,  
15:37:29 28 in the body of the literature. Could it be explained on

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15:37:33 1 various mechanics of how the papers were conducted. So  
15:37:35 2 that, in fact, is why we devised this method.

15:37:39 3 Q So am I correct in understanding, then, that  
15:37:43 4 you created a list of factors, issues that you would  
15:37:49 5 search for in the study and then accumulate data out of  
15:37:54 6 this study to plug into the corresponding category that  
15:37:58 7 you're searching for; is that correct?

15:38:00 8 A Yes.

15:38:01 9 Q And then you put that in some format, some  
15:38:05 10 database?

15:38:07 11 A Yes.

15:38:07 12 Q And how many factors were you looking for in  
15:38:11 13 the articles?

15:38:13 14 A Well, there -- it depends on what factor  
15:38:16 15 you're dealing with. These are some of the criteria. And  
15:38:19 16 then when we -- confounders would be one heading of one of  
15:38:23 17 the aspects we looked at. Within confounding variables,  
15:38:27 18 there was in the neighborhood of 20 issues that we  
15:38:30 19 addressed. And as we state in the manuscript, these were  
15:38:33 20 ones that have been indicated through the literature to be  
15:38:38 21 a potential confounder, and then there were others which  
15:38:42 22 we felt were intuitively appropriate to examine. And I'm  
15:38:48 23 sure there are others that we ignored.

15:38:49 24 Q All right. Is there a complete listing of  
15:38:52 25 all the criteria that you used in your review of the

15:38:55 26 literature in one of the articles --

15:38:56 27 A That's right.

15:38:57 28 Q -- that you published?

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15:38:58 1 A Yes, there is. There is a table in both the

15:39:01 2 1993 paper, and that's the one with -- and a table in the

15:39:12 3 1996 paper. Yes.

15:39:14 4 Q Can you identify those papers --

15:39:16 5 A Yes.

15:39:16 6 Q -- you're referring to, in your C.V.?

15:39:18 7 A Yes, I can. The Hood paper dealt primarily

15:39:28 8 with endpoints. So we didn't look at confounding

15:39:32 9 variables in that study.

15:39:33 10 The Indoor Environment in preschool children,

15:39:42 11 1993.

15:39:42 12 Q What page are you on?

15:39:44 13 A Top of page 12, is one that lists the

15:39:51 14 confounding variables, and they're basically the same for

15:39:55 15 preschool and school-aged. And the 1996 Indoor and Built

15:40:03 16 Environment paper lists the confounders that we looked at

15:40:06 17 in birth weight of offspring.

15:40:08 18 So it would be on the top of page 12, the top

15:40:18 19 paper and the fourth paper down. I'm sorry. I'm sorry.

15:40:21 20 Not the fourth paper down. The sixth paper down.

15:40:26 21 Q So from those two articles, I would get a

15:40:31 22 listing of all of the criteria that you used to go to this

15:40:34 23 review in the articles?

15:40:35 24 A Yes. Because even in the more recent one, we

15:40:38 25 used the same standard, yes.

15:40:42 26 Q The one that's in review now?

15:40:44 27 A That's right. I went back, as a matter of

15:40:47 28 fact, from the first paper, on, to be absolutely accurate.

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15:40:51 1 Q You didn't add any new criteria in the paper

15:40:54 2 that is in review now?

15:40:55 3 A In the paper that's in review, there are

15:40:59 4 things that we documented that we never addressed before.

15:41:05 5 Some of -- most of which were really just for the sake of

15:41:10 6 record, providing the information.

15:41:14 7 A couple of items were critical, and the ones

15:41:17 8 that are critical, as a matter of fact, I address in my

15:41:23 9 relatively -- my abstract environment here. In other

15:41:27 10 words, I felt that they were appropriate to address here.

15:41:30 11 And among those ones that we now documented that we

15:41:35 12 addressed in descriptive terms earlier but we never

15:41:39 13 quantitated were things like how many papers -- in how

15:41:45 14 many papers was ETS exposure validated by a marker. What

15:41:51 15 was the distribution of the magnitude of risk.

15:41:54 16 Previously, we didn't give an indication of the magnitude

15:41:57 17 of risk. We only looked at positive statistically

15:42:02 18 significant studies and nonsignificant.

15:42:07 19 In the new one, we say what proportion of

15:42:10 20 these papers have a risk that's two or below or two or

15:42:12 21 above and that type of thing.

15:42:14 22 And the other thing that I indicated in the

15:42:17 23 current paper was in how many -- how many papers the

15:42:21 24 clinical endpoint was validated and how many papers the

15:42:27 25 ETS exposure was validated by a cotinine marker.

15:42:32 26 I may have repeated myself there, but I think

15:42:35 27 I've covered it all.

15:42:36 28 Oh. We also indicated what portion of the

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15:42:40 1 paper showed a dose-related effect, whether there was a

15:42:44 2 dose response.

15:42:45 3 Q All right.

15:42:46 4 A We got better at doing this. I'm sorry. So

15:42:49 5 we got more comprehensive in the information.

15:42:51 6 Q So what else did you do in order to explain

15:42:54 7 to me the work that you did in reviewing these 250

15:42:57 8 articles to arrive at your opinions?

15:42:59 9 A Besides that?

15:43:01 10 Q Yeah. I don't know if there is more, but if

15:43:03 11 there is more, I want to know.

15:43:05 12 A Probably time, thinking about what the

15:43:10 13 implications were. Tabulating the data. The things that

15:43:17 14 go in to doing scholarly work. You look at the body of

15:43:21 15 information, and you develop insights.

15:43:24 16 Q Who developed the criteria to look for in

15:43:29 17 reviewing the articles?

15:43:30 18 A I think I was, in large measure, the person

15:43:33 19 who developed that criteria.

15:43:34 20 Q Who else? Did anybody assist you in that?

15:43:37 21 A Well, I think I developed a template, for

15:43:40 22 example, and I bounced them off my brother. And I got

15:43:43 23 some input from him. I don't recall specifically what it

15:43:46 24 was. It might have well been, gee, that looks great. Go

15:43:50 25 with it. Or it might have been have you considered this

15:43:55 26 type of situation? But I would say the lion's share of

15:44:00 27 developing that was something that I developed.

15:44:02 28 Q Did you discuss the template with anyone

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15:44:04 1 other than your brother before actually putting it into

15:44:07 2 effect and doing the work?

15:44:12 3 A Not that I recall. I'm sorry. I may have

15:44:16 4 mentioned it to my brother's partner, Sorrell Schwartz, in

15:44:23 5 the course of discussing it. But I don't think I shared

15:44:29 6 it with anybody.

15:44:30 7 Q When you say "a template," what do you mean

15:44:36 8 by that? I'm envisioning a list of criteria that you're

15:44:41 9 looking for. What is the template?

15:44:44 10 A Can I describe it on a piece of paper --

15:44:46 11 Q Sure.

15:44:46 12 A -- to give you an idea of how I think I did

15:44:49 13 it?

15:44:50 14 Q Sure.

15:44:50 15 A When I originally did it, I think I had --

15:44:53 16 when I originally did it, I had a predetermined

15:44:56 17 questionnaire that I -- that I -- that I had put on a

15:45:00 18 computer that I had -- to be printed out for each

15:45:05 19 individual paper in which I addressed issues like location

15:45:08 20 of study, number of subjects, ETS exposed, down the line.

15:45:14 21 And I would generate individual sheets, very unweildy, for

15:45:19 22 each paper, as I went through in this regard. And then I

15:45:23 23 would file them away. And when I would make a grand

15:45:26 24 master table of the information, I would extract that.

15:45:29 25 That was the operation that we did back when we did the

15:45:34 26 1992, '93 work.

15:45:37 27 In the more recent generation of the paper, I

15:45:41 28 got much more efficient, and I arranged it somewhat

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15:45:45 1 differently. What I actually did was I had the table

15:45:48 2 constructed in a way where I had each item listed over

15:45:52 3 here, for example, listed horizontally across the top of

15:45:58 4 the page. And in that particular situation, I would have

15:46:01 5 the various items of interest: location of study, number

15:46:05 6 of subjects, type of statistical analysis, whether or not

15:46:12 7 there was a dose response. Was ETS validated. I had  
15:46:17 8 various sheets like this. And then I would analyze each  
15:46:20 9 individual paper, and I would put in what the criterion or  
15:46:27 10 what the -- what type of item would fit into the various  
15:46:31 11 categories.

15:46:32 12 In addition to that, as we read each paper, I  
15:46:34 13 did have a template confounder sheet because we were  
15:46:37 14 looking at the individual confounding variables, those 20  
15:46:43 15 or so. And what I would have in that particular table  
15:46:46 16 would be each of the 21 confounders variable -- 21  
15:46:53 17 confounders that we consider important, and another  
15:46:55 18 category for ones that we may have omitted. Whether or  
15:46:58 19 not they were addressed, whether how they were addressed,  
15:47:03 20 what was the description.

15:47:05 21 As I indicated earlier, for example, there  
15:47:07 22 are numerous ways in which socioeconomic status was  
15:47:12 23 addressed. Maternal education, paternal occupation,  
15:47:21 24 neighborhood that they lived in, various criteria. And I  
15:47:24 25 would list how the criterion were considered.

15:47:27 26 And then in another column in this list, I  
15:47:29 27 would indicate whether or not the confounder that we were  
15:47:36 28 looking at, the potential confounder was statistically  
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15:47:40 1 associated with the endpoint of interest. So I had that  
15:47:43 2 type of information. And that's how I --  
15:47:46 3 Q Statistically associated --  
15:47:47 4 A With the endpoint of interest.  
15:47:49 5 Q -- in the paper by the authors?  
15:47:51 6 A That's right. That's right. For example,  
15:47:54 7 maybe the paper is primarily looking at ETS and asthma.  
15:47:58 8 And maybe the paper also revealed whether or  
15:48:02 9 not history of asthma was statistically significant with  
15:48:05 10 that -- with that endpoint. And I would assume that  
15:48:09 11 because it was considered -- it was adjusted for in the  
15:48:13 12 study, that's not always the case. But that was my way of  
15:48:16 13 really looking at it in a fashion that was not biased to  
15:48:23 14 showing a noncorrected-for adjustment.

15:48:29 15 So I would have information on whether or not  
15:48:32 16 history, family history, or indoor air pollution or  
15:48:39 17 outdoor, what have you, would be associated with the  
15:48:42 18 endpoint. And from that, we had a tremendous amount of  
15:48:45 19 information from the paper, some of which lent itself to  
15:48:48 20 the ETS issue itself, or the parental smoking issue. Some  
15:48:52 21 which was very informative because out of that emerged  
15:48:55 22 endpoints which appear to be consistently associated with  
15:49:01 23 these confounders.

15:49:03 24 You raise an issue I wanted to add, what's a  
15:49:07 25 confounder and what's not.

15:49:09 26 Whether or not we were just pulling  
15:49:14 27 confounders out of the air. The truth of the matter is in  
15:49:20 28 my retrospective reflection on what we did, although we  
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15:49:24 1 predetermined 20 or so confounding variables and although  
15:49:29 2 there was a variation from one paper to the next into  
15:49:33 3 which confounding variables were addressed, if you were to  
15:49:38 4 take all of the variables, all of the potential  
15:49:41 5 confounders, the majority of them, I think 19 or 20 were  
15:49:47 6 addressed somewhere in that database.

15:49:49 7 So it wasn't something that we had contrived  
15:49:52 8 as a -- something that was out of the blue. We may not  
15:49:57 9 have listed it there because it wasn't in that  
15:50:00 10 database. But in retrospect, we felt that there was a  
15:50:03 11 basis for considering these confounders, because somebody

15:50:06 12 else who did the study thought it was important to  
15:50:08 13 address.

15:50:08 14 Q So once you have all this data, then what did  
15:50:11 15 you do to interpret it, to arrive at the conclusions that  
15:50:15 16 you've done?

15:50:16 17 A Well, what I did, then, is I went through all  
15:50:19 18 of these enormous data sheets that I collected, and I  
15:50:27 19 tabulate them to come up with some coherent body of  
15:50:30 20 knowledge that I could then interpret. And then in the  
15:50:33 21 selection of what I wanted to include in the paper, I  
15:50:38 22 figured that if I included everything that I did, which  
15:50:40 23 was about a year's work, it would have been a 75-page  
15:50:43 24 paper of 25 or 30 tables that would put anybody to sleep.

15:50:49 25 And so what we did is we thought -- we  
15:50:54 26 abstracted what we felt was the most relevant and highest  
15:51:03 27 impact of information. And that constituted the analysis,  
15:51:06 28 the data that incorporated into the paper.

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15:51:10 1 Q You're talking about --

15:51:12 2 A We're doing now.

15:51:13 3 Q The one that's in review right now?

15:51:15 4 A That's right.

15:51:16 5 Q And is that the most comprehensive review of  
15:51:20 6 the literature that you've done, the one that's in review  
15:51:22 7 now?

15:51:23 8 A I believe it's probably -- I believe it's the  
15:51:25 9 most comprehensive review of the literature done, period.

15:51:28 10 Q And is that body of work that you're relying  
15:51:32 11 on to form the basis of your opinions in this case?

15:51:34 12 A Yes. Because of -- this is stuff that I  
15:51:38 13 haven't done in preparation largely for this  
15:51:41 14 testimony. But this is where the expertise that I had  
15:51:45 15 based on what I've done in that particular area.

15:51:47 16 Q I understand from prior testimony that this  
15:51:50 17 was done at the request of BAT, or Brown & Williamson,  
15:51:56 18 through Sharon Boyse.

15:51:58 19 A Yes.

15:51:59 20 Q But it, as it applies to this work, is the  
15:52:03 21 body of work upon which you are relying for your  
15:52:05 22 opinions?

15:52:06 23 MR. STONE: Objection; misstates the  
15:52:07 24 witness's prior testimony.

15:52:08 25 BY MR. HULBURT:

15:52:08 26 Q Is what I said correct?

15:52:10 27 A Could you repeat that?

15:52:12 28 Q Yeah.

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15:52:12 1 This work which is now reflected in the  
15:52:14 2 manuscript under review for publication is the body of  
15:52:18 3 work that you're relying on for your opinions in this  
15:52:20 4 case?

15:52:21 5 MR. STONE: Same objections.

15:52:22 6 THE WITNESS: In large measure, with regard  
15:52:27 7 to respiratory health effects, except to say that it just  
15:52:35 8 underscores the opinions that we had in the papers that  
15:52:40 9 were published in 1993 and '92. It's just more of the  
15:52:45 10 same.

15:52:45 11 BY MR. HULBURT:

15:52:45 12 Q I understand.

15:52:46 13 A Yes.

15:52:46 14 Q And more comprehensive?

15:52:48 15 A That's right.

15:52:49 16 Q And up to date?



15:52:49 17 A That's right.  
15:52:50 18 MR. HULBURT: So I renew my request that that  
15:52:52 19 be produced since it clearly is part of the basis for his  
15:52:55 20 opinion in this case. And if we don't have it, then I  
15:53:00 21 guess we have to deal with that later in front of the  
15:53:02 22 judge. But I don't know how you can avoid producing that  
15:53:05 23 work.  
15:53:05 24 BY MR. HULBURT:  
15:53:05 25 Q Is there anything else in that work that  
15:53:13 26 would describe what you did or have you described the  
15:53:17 27 effort entirely now?  
15:53:18 28 MR. STONE: You're having him describe the  
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15:53:20 1 work you did to prepare for his testimony here?  
15:53:22 2 MR. HULBURT: No. I'm having you describe  
15:53:26 3 the work that you've done to review all these articles in  
15:53:29 4 order to arrive at whatever opinions you have regarding  
15:53:31 5 these articles.  
15:53:32 6 BY MR. HULBURT:  
15:53:32 7 Q You explained to me you created the  
15:53:35 8 template. You went through the articles. You created a  
15:53:39 9 database.  
15:53:39 10 A Oh, I'm sorry.  
15:53:41 11 Q You then analyzed the database?  
15:53:43 12 A Yes.  
15:53:43 13 Q What else was done?  
15:53:44 14 A Well, you know, in a paper, you -- not  
15:53:50 15 only -- a portion of any scholarly work is a discussion.  
15:53:55 16 Okay.  
15:53:55 17 And the discussion is how it should be, and  
15:54:04 18 I think this is what we tried to do. A discussion should  
15:54:07 19 be your interpretation of your findings. Very often, you  
15:54:10 20 will look at your data, and you develop interpretations.  
15:54:14 21 And the first interpretation sometimes is an intuitive  
15:54:22 22 interpretation, and it says logically this appears to be a  
15:54:28 23 much more reasonable explanation than the one -- the  
15:54:36 24 alternate explanation.  
15:54:37 25 ETS versus in utero effects, for example.  
15:54:40 26 Basically, what that did was to encourage me, if you will,  
15:54:47 27 which is part of the scholarship process, to go to the  
15:54:50 28 literature and look at other aspects of the literature  
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15:54:54 1 that are relevant to what I was -- to my interpretation.  
15:55:02 2 For example, I had never really focused on  
15:55:04 3 active smoking during pregnancy and its health effects. I  
15:55:09 4 went to the literature and found adequate doc- -- I knew  
15:55:13 5 it existed. I didn't have it right at my fingertips. And  
15:55:16 6 I got access to these citations, because in a scholarly  
15:55:20 7 publication, everything you say should be attributed.  
15:55:25 8 There should be some citation attribution. So I just  
15:55:29 9 couldn't say I believe it's due to an in utero effect. I  
15:55:32 10 had to find documentation to bear me out.  
15:55:35 11 While we're on the subject, another aspect of  
15:55:37 12 the issue was the literature that was published on this  
15:55:43 13 issue related to my -- to my literature. And there had  
15:55:46 14 been several meta-analyses that had come to the conclusion  
15:55:55 15 that ETS is causally associated -- or parental smoking is  
15:56:00 16 causally associated with respiratory health effects in  
15:56:04 17 children, explainable by ETS.  
15:56:07 18 I had looked -- analyzed these particular  
15:56:10 19 studies. I abstracted this information from the  
15:56:16 20 literature. I made a table. In fact, I brought the table  
15:56:19 21 with me today in the event that you wanted it or you had

15:56:26 22 given me an opportunity where I have taken out the essence  
15:56:29 23 of the major meta-analyses in this area, basically to  
15:56:31 24 illustrate, which I do in my article, that the conclusions  
15:56:34 25 that I derive are based on virtually the same data, has  
15:56:40 26 been published in the literature. The only difference is  
15:56:44 27 the other authors who have made the conclusion that  
15:56:47 28 there's a causal relationship are very assertive in saying  
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15:56:52 1 that these statistically significant associations are  
15:56:57 2 indicative of a causative relationship.  
15:56:59 3 And with all due respect to Dr. DiFranza and  
15:57:02 4 Lew, with all due respect to the group that published  
15:57:06 5 those series of articles in Thorax. And there's another  
15:57:11 6 author, Lee. I looked at their data. I tabulated their  
15:57:15 7 data that was in their paper. I see they are basically  
15:57:17 8 seeing the same thing I'm seeing, but they're interpreting  
15:57:20 9 it differently.  
15:57:21 10 Q You have that table with you now?  
15:57:24 11 A I have that table. I took it out of the  
15:57:26 12 manuscript because I thought it was appropriate, and I  
15:57:29 13 brought it in -- I brought it with me in the event that --  
15:57:34 14 and it's a summary from the table, from the article. It's  
15:57:37 15 in the discussion. It's not -- it's actually a summary of  
15:57:41 16 what the -- this is my only copy.  
15:57:43 17 But it takes those three -- well, there  
15:57:47 18 were -- I think there were five meta-analyses that look at  
15:57:51 19 the association. Parental smoking and respiratory health  
15:57:59 20 effects in children.  
15:58:00 21 And when you look at the data, they're  
15:58:04 22 basically saying the same thing I'm saying in terms of  
15:58:07 23 magnitude of risk. And they are showing the same things  
15:58:09 24 I'm showing.  
15:58:10 25 And one of the reasons I decided to do this  
15:58:12 26 is that there's been an argument that, well, you should  
15:58:15 27 really look at the best papers. My opinion is there's a  
15:58:22 28 degree of subjectivity of what is the best papers.  
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15:58:24 1 So relying on those meta-analyses, which is  
15:58:27 2 presumably the most appropriate literature, do their data  
15:58:31 3 come up with the same -- essentially the same numbers as  
15:58:38 4 mine -- as mine does.  
15:58:40 5 MR. HULBURT: All right. Let's mark this as  
15:58:42 6 Exhibit 5199.  
15:58:44 7 THE WITNESS: Fine.  
15:58:45 8 (Exhibit 5199 was marked for identification.)  
15:58:48 9 MR. HULBURT: Since that's not published,  
15:58:50 10 Dr. Witorsch, should that be marked "confidential" before  
15:58:53 11 it appears in publication so it's not otherwise accessible  
15:58:57 12 to other people in the field?  
15:58:59 13 THE WITNESS: Yeah. I would just feel  
15:59:00 14 comfortable from the standpoint of just a proprietary  
15:59:04 15 product. That's one of the reasons I'm uncomfortable  
15:59:09 16 about giving an unpublished manuscript just for the public  
15:59:15 17 domain.  
15:59:15 18 MR. STONE: Then I'll designate Exhibit 5199  
15:59:20 19 as confidential pursuant to the protective order in this  
15:59:23 20 case. After we make a copy of it and return the original  
15:59:26 21 to Dr. Witorsch, I'll write an appropriate legend on the  
15:59:30 22 copy that's marked an exhibit.  
15:59:31 23 BY MR. HULBURT:  
15:59:31 24 Q This is part of the materials that you've  
15:59:34 25 submitted for publication in the --  
15:59:35 26 A Yes.

15:59:36 27 Q -- Indoor Built journal?  
15:59:40 28 A That's right. It appears in the discussion  
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15:59:44 1 section, whereas, all the other things are my results.  
15:59:48 2 That's my analysis. That came about as I was developing  
15:59:51 3 the discussion. And I was addressing the issue of the  
15:59:58 4 meta-analyses.  
16:00:00 5 And I felt for the sake of being  
16:00:02 6 scientifically complete -- and I might say unlike other  
16:00:08 7 people who tend to sometimes ignore things that contradict  
16:00:11 8 their argument, I'll say that I think it's appropriate to  
16:00:15 9 discuss the issues of I'll say other people who have done  
16:00:18 10 meta -- meta-analyses on this particular body of  
16:00:22 11 information. And these five articles published from 1996,  
16:00:28 12 I believe, to 1998 were the most recent, the most  
16:00:37 13 up-to-date meta-analyses on these areas.  
16:00:41 14 The papers by Strachan and Cook as part of  
16:00:45 15 that ten-paper series that was published in Thorax, where  
16:00:51 16 they look at the ETS.  
16:00:52 17 MR. STONE: You're starting to look further  
16:00:54 18 and further away from the camera every time.  
16:00:56 19 THE WITNESS: I'm sorry.  
16:00:56 20 MR. STONE: If you can swing back to your  
16:00:59 21 left and maybe slide to your right a little bit. Push to  
16:01:03 22 your right, I think. All the way to your right. Okay.  
16:01:06 23 Is that better?  
16:01:09 24 VIDEOGRAPHER: Sure. Great.  
16:01:10 25 MR. HULBURT: You always wanted to be a  
16:01:12 26 director?  
16:01:12 27 MR. STONE: What the heck. You got to try.  
16:01:15 28 I just see him sliding off the screen here.  
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16:01:17 1 BY MR. HULBURT:  
16:01:17 2 Q Your designation, Doctor, says that you're  
16:01:20 3 going to testify regarding ETS exposure and reproductive  
16:01:23 4 effects. What is that? What do you understand that area  
16:01:28 5 to be?  
16:01:29 6 A I think when that -- when that particular  
16:01:43 7 document was being submitted, we were thinking in terms of  
16:01:45 8 the entire issue of reproductive toxicity. I think it has  
16:01:50 9 been focused in on the area of intrauterine growth  
16:01:53 10 retardation. I am, just to sort of qualify myself, if  
16:01:59 11 anything, I am considered a reproductive toxicologist.  
16:02:04 12 I added to the most -- one of the more recent  
16:02:10 13 reference texts in the area, in the last four or five  
16:02:14 14 years. Other than IUGR, I don't think there's any  
16:02:19 15 evidence to suggest that environmental tobacco smoke  
16:02:23 16 adversely affects the reproductive system.  
16:02:26 17 Q We've already talked about your opinions  
16:02:31 18 with respect to IUGR, is that there may be good evidence  
16:02:35 19 that active smoking has an effect on IUGR, and there's no  
16:02:39 20 good evidence to suggest that ETS has an effect.  
16:02:41 21 MR. STONE: Objection; misstates the  
16:02:43 22 witness's prior testimony. It's compound.  
16:02:45 23 You can answer.  
16:02:46 24 BY MR. HULBURT:  
16:02:46 25 Q Is what I said correct?  
16:02:47 26 A I wouldn't phrase it that way. I would say  
16:02:52 27 the evidence of active smoking being causely related to  
16:02:56 28 growth retardation is fairly consistent. I would add  
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16:03:01 1 there are alternate explanations, but I think the active  
16:03:07 2 smoking is the most logical issue there. I think in terms

16:03:14 3 of the relationship between ETS exposure and intrauterine  
16:03:20 4 growth retardation, there is no consistent evidence to  
16:03:24 5 support that conclusion. I'm more comfortable with that  
16:03:27 6 phraseology.

16:03:29 7 Q Do you have an opinion as to whether it is  
16:03:48 8 more probable than not that there is a connection between  
16:03:50 9 ETS exposure and IUGR?

16:03:54 10 MR. STONE: Objection; vague and ambiguous,  
16:03:58 11 lacks foundation.

16:04:01 12 You can answer.

16:04:03 13 THE WITNESS: Yes. My opinion is it's more  
16:04:07 14 probably not.

16:04:08 15 BY MR. HULBURT:

16:04:08 16 Q It's more probable that there's no connection?  
16:04:12 17 A That's right. And I might add, because I  
16:04:14 18 think it's appropriate, that I bristle a little bit at  
16:04:19 19 some of the attempts in the literature to develop a  
16:04:24 20 connection which really does not exist. And what I mean  
16:04:27 21 by that is the attempt by certain authors to ignore  
16:04:33 22 standards of statistical significance.

16:04:37 23 Q What articles are you referring to?  
16:04:39 24 A I think I've listed several of the reviews.  
16:04:43 25 In particular, there were reviews by Wyndham et al. There  
16:04:48 26 are two or three papers. One is a -- one is a study, an  
16:04:56 27 epidemiologic study. Another paper -- these were all  
16:04:59 28 published within the last year. -- is a so-called  
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16:05:03 1 meta-analysis. And the third is a document that was  
16:05:06 2 prepared as a background paper to the World Health  
16:05:10 3 Organization.

16:05:10 4 And all of them show what I would consider  
16:05:14 5 virtually no evidence for an association and interpret the  
16:05:19 6 data as though there is an association.

16:05:25 7 It's -- in addition to that, there's another  
16:05:27 8 paper which I submitted the title page that appeared in  
16:05:30 9 Environmental Health Perspectives, which is a respected  
16:05:35 10 journal, on ETS exposure in the workplace by two members  
16:05:40 11 of the Hopkins School of Public Health, which is a  
16:05:42 12 respected school, Dr. Misra Nguyen.

16:05:49 13 And, again, there is -- although they  
16:05:52 14 conclude that there is a causal association, it's almost  
16:05:55 15 as though there's the Emperor's new clothes.

16:05:59 16 You're reading it, and you really don't see  
16:06:03 17 what the basis of their conclusion is.

16:06:05 18 Q Is the basis of your opinion that there  
16:06:18 19 probably is no connection between ETS and IUGR your review  
16:06:23 20 of all of the published articles on that subject?

16:06:26 21 A Yes.

16:06:26 22 Q Anything else?

16:06:28 23 A No.

16:06:28 24 Q You're also listed here to testify regarding  
16:06:35 25 ETS exposure and sudden infant death syndrome?

16:06:39 26 A Yes.

16:06:39 27 Q Is it your opinion that there is a causative  
16:06:44 28 connection between active smoking and sudden infant death  
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16:06:50 1 syndrome?

16:06:50 2 A I would respond to that with some degree of  
16:06:55 3 caution. I would say there probably is an association,  
16:06:59 4 because there are a large number of papers that show that  
16:07:05 5 maternal smoking during pregnancy is associated with an  
16:07:11 6 increased risk of SIDS. And the observation is  
16:07:15 7 consistent. The risk ratio is robust. It's above 2 to

16:07:22 8 the 5 range.  
16:07:25 9 And the only reason I would be tentative  
16:07:29 10 about it is I don't think there's an explanation, per se,  
16:07:33 11 of what causes SIDS. And its incidence, my understanding,  
16:07:38 12 is very low.  
16:07:39 13 But the evidence is solid from the published  
16:07:47 14 literature.  
16:07:47 15 Q And in your opinion, is there a probable  
16:07:51 16 connection between ETS and SIDS?  
16:07:54 17 A I think there's insufficient data to make  
16:07:58 18 that conclusion.  
16:07:58 19 Q Do you have an opinion as to whether or not  
16:08:05 20 there is a probable connection between ETS and SIDS?  
16:08:09 21 A I would be reluctant to make an opinion  
16:08:16 22 because I -- there is insufficient information, and the  
16:08:20 23 evidence of smoking during pregnancy is so consistent as  
16:08:27 24 well as at least one other very important risk factor that  
16:08:33 25 has to be addressed. And that is prone versus supine  
16:08:39 26 sleeping position.  
16:08:40 27 Q That's a -- that's a confounder?  
16:08:47 28 A That is a critical confounder, yes, according  
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16:08:51 1 to the literature.  
16:08:52 2 Q So am I correct in understanding that your  
16:08:54 3 concerns, then, about the body of science that suggests  
16:08:59 4 there is a connection between ETS and SIDS is, first, that  
16:09:04 5 maybe these mothers were actually smoking during the  
16:09:06 6 pregnancy, and, second, how do we deal with whether the  
16:09:11 7 baby is on his back or his front when sleeping?  
16:09:14 8 A On a routine basis. And the data implicating  
16:09:18 9 ETS is inconsistent. The surrogate, if you will, for ETS  
16:09:29 10 exposure is being exposed to the smoke of others or being  
16:09:34 11 exposed to paternal smoke. And the majority of papers  
16:09:40 12 published have not supported that association.  
16:09:43 13 So I -- I don't think the evidence supports  
16:09:49 14 it at this particular time.  
16:09:53 15 Q As you sit here now, you have no opinion as  
16:09:56 16 to whether there is a probable connection between ETS and  
16:09:58 17 SIDS?  
16:09:58 18 MR. STONE: Objection; asked and answered on  
16:10:00 19 several occasions.  
16:10:01 20 You can answer it again.  
16:10:02 21 THE WITNESS: That's probably the most  
16:10:04 22 prudent way I would answer that question.  
16:10:06 23 BY MR. HULBURT:  
16:10:06 24 Q You're also designated to testify regarding  
16:10:15 25 ETS exposure and respiratory effects and lung function.  
16:10:19 26 Are those, in your thought, two different  
16:10:22 27 things, or have -- do we need to talk about respiratory  
16:10:26 28 effects and then talk about lung function?  
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16:10:31 1 A Well, at the time that this was submitted, I  
16:10:33 2 think there were so many areas that I was involved in,  
16:10:37 3 that as we approached what I -- the deposition time, I  
16:10:41 4 came to the realization that if I was going to give  
16:10:45 5 effective testimony that was up to date, I had to limit my  
16:10:50 6 activities.  
16:10:50 7 And in discussing it with the attorneys, I  
16:10:54 8 felt that I had enough of -- I was up -- I was really up  
16:11:01 9 to speed in respiratory health effects. Those are the  
16:11:05 10 clinical endpoints, symptoms, and illness. I was -- I  
16:11:10 11 could get up to speed in a reasonable time with regard to  
16:11:14 12 IUGR because there was only -- there were under 50

16:11:19 13 papers. And I had read at least 41 of them. So there  
16:11:22 14 were very much. And I was -- I could handle SIDS because  
16:11:27 15 it involved a relatively small database of studies.  
16:11:32 16 We decided I wouldn't offer a -- an  
16:11:38 17 authoritative opinion on lung function because although I  
16:11:43 18 did follow the literature certainly very closely and have  
16:11:48 19 published on it, up to 1992, and I believe I've looked  
16:11:53 20 systematically at one time or another on the literature up  
16:11:57 21 to 1996, I can't say with certainty that I've looked at  
16:12:01 22 everything.

16:12:01 23 Q So you used the phrase you're not offering  
16:12:05 24 an authoritative opinion, but I need to know are you going  
16:12:08 25 to offer an opinion regarding lung function at trial --  
16:12:14 26 lung function and its connection to ETS?  
16:12:16 27 A I couldn't -- I couldn't, in good conscience,  
16:12:19 28 because I haven't looked at the literature recently.

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16:12:24 1 Q So in this category of ETS exposure and  
16:12:28 2 respiratory effects on lung cancer you -- you understand  
16:12:32 3 that you're talking about whether there is any respiratory  
16:12:36 4 effect for ETS exposure?  
16:12:37 5 A No. Respiratory -- I hope I'm not  
16:12:43 6 overlapping, but respiratory effects and health effects  
16:12:47 7 deal specifically with the clinical endpoints such as  
16:12:52 8 asthma, bronchitis, wheezing, cough, bronchilitis, ETS.  
16:12:58 9 The function, when we have used the term  
16:13:01 10 "function," and we have looked at the literature up until  
16:13:06 11 1996, we're looking at spirometric endpoints. And those  
16:13:14 12 are endpoints that measure pulmonary function, per se. So  
16:13:22 13 they are not based on a subjective response to a  
16:13:25 14 questionnaire, and they are not based on a physician's  
16:13:30 15 evaluation. But they are based on a number generated when  
16:13:33 16 a child is put through a pulmonary function test. And  
16:13:39 17 the only reluctance I have is that I haven't looked at the  
16:13:42 18 literature very recently.

16:13:45 19 Q So what are your opinions, then, with respect  
16:13:49 20 to the relationship between ETS exposure and the  
16:13:56 21 respiratory effects including incidents and severity of  
16:14:02 22 asthma?  
16:14:03 23 A I offered that opinion earlier. Basically, I  
16:14:08 24 will state that the association between parental smoking  
16:14:15 25 and respiratory health effects in children, as clinical  
16:14:22 26 endpoints, is age-related. There is a consistent,  
16:14:26 27 although modest, association between parental smoking and  
16:14:34 28 respiratory endpoints in younger children, which we

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16:14:38 1 classify as preschool children, and the association  
16:14:42 2 between parental smoking and endpoints in older children  
16:14:48 3 are not consistent when you look at specific  
16:14:54 4 classifications or endpoints of respiratory disease such  
16:14:59 5 as asthma, wheezing, bronchitis, cough.  
16:15:07 6 When you look at those individual endpoints  
16:15:09 7 in older children, you see an association which is  
16:15:15 8 consistent somewhere between 25 to 50 percent of the  
16:15:20 9 time. So 50 to 75 percent of the studies do not show a  
16:15:26 10 statistically significant association.  
16:15:28 11 So I believe that the age-relationship should  
16:15:32 12 be looked at in a segmented fashion. And, as I said  
16:15:38 13 earlier, in preschool children, although one cannot rule  
16:15:42 14 out ETS, a -- in my opinion, a more logical causal  
16:15:50 15 relationship would appear to be an effect associated with  
16:15:56 16 maternal smoking during pregnancy, since postpartum  
16:16:00 17 smoking and prepartum smoking is -- are linked. And the

16:16:07 18 intensity of exposure to tobacco smoke would be so much  
 16:16:11 19 higher via a transplacental route than it would be from an  
 16:16:16 20 ETS-related effect.

16:16:18 21 Q What are you relying on to say that the  
 16:16:20 22 postpartum and during pregnancy smoking are related?

16:16:26 23 A Well, there have been reports -- and I've  
 16:16:29 24 cited them in my various documents. There are people who  
 16:16:34 25 have done questionnaires, and they find at least 90  
 16:16:37 26 percent of the women who say they smoked postpartum,  
 16:16:41 27 smoked during pregnancy.

16:16:44 28 Q How much?  
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16:16:45 1 A How much? 90 to 100 percent of the women  
 16:16:49 2 smoked at both times. In fact --

16:16:51 3 Q I mean, how much smoking?  
 16:16:56 4 THE REPORTER: I'm sorry.

16:17:00 5 MR. HULBURT: I think he said 90 to 100  
 16:17:00 6 percent of the women.

16:17:00 7 THE WITNESS: Of the women.

16:17:00 8 MR. HULBURT: Smoking both times.

16:17:00 9 BY MR. HULBURT:

16:17:00 10 Q. And I'm asking, smoked how much during  
 16:17:02 11 pregnancy?

16:17:03 12 A It varies, I believe.

16:17:06 13 Q Does that mean they smoked at least once?

16:17:09 14 A No. No. It usually means that they were  
 16:17:11 15 active smokers. They smoked on a regular basis.

16:17:15 16 Q Can you identify the study that you're  
 16:17:20 17 relying on for that conclusion?

16:17:21 18 A I can't identify it offhand, but I'm sure if  
 16:17:24 19 I looked in one of my writings, I can address it.

16:17:27 20 In fact, that particular issue emerges into  
 16:17:33 21 discussion of the parental smoking SIDS study. And, yes,  
 16:17:38 22 as we talked, I can identify a paper, because one of the  
 16:17:41 23 more recent commentators on the ETS and SIDS issue is  
 16:17:46 24 Dr. Mitchell from -- I believe either Australia or  
 16:17:50 25 New Zealand who has written some recent opinions on this  
 16:17:58 26 particular issue. He's been an active worker in the field  
 16:18:01 27 and actually wrote a background paper, the World Health  
 16:18:05 28 Organization.

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16:18:05 1 And he's of the opinion that it is very  
 16:18:11 2 difficult, if not impossible, to differentiate women who  
 16:18:17 3 smoke prepartum and postpartum from those women who only  
 16:18:23 4 smoked after pregnancy and did not smoke during pregnancy,  
 16:18:27 5 because the number of women who stopped during pregnancy  
 16:18:32 6 is relatively small.

16:18:34 7 Q Is the work that you've done in reviewing the  
 16:18:43 8 250-some articles the basis for your opinion regarding the  
 16:18:49 9 relationship between ETS and respiratory effects in  
 16:18:52 10 children?

16:18:54 11 A Yes. I've answered that before.

16:18:56 12 Q Anything else? Any other work?

16:19:06 13 A Well, just to sort of underscore what I've  
 16:19:14 14 just talked about, I would refer you to this document  
 16:19:17 15 5199. And when one looks at the meta-analyses of these  
 16:19:23 16 studies, there is a meta-analyses of paper --  
 16:19:33 17 meta-analyses of the 1977 paper published by Strachan and  
 16:19:39 18 Cook where they looked at the effect of paternal smoking  
 16:19:45 19 and a variety of respiratory endpoints in 16 studies.

16:19:50 20 They come up with an elevated risk of 1.29,  
 16:19:57 21 which is statistically significant. This is a  
 16:19:59 22 meta-analysis. But very small. And they look at 16

16:20:03 23 papers, and of those 16 papers, 10 of the 16 fail to show  
 16:20:09 24 a statistically significant effect.

16:20:12 25 So paternal smoking would be a more direct  
 16:20:16 26 way of looking at ETS not related to maternal smoking in  
 16:20:25 27 pregnancy.

16:20:25 28 In their 1998 paper, they look at smoking in  
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16:20:33 1 children they classify as preschool and school-aged. They  
 16:20:36 2 grouped them together. These are eight papers. Again,  
 16:20:39 3 the association between paternal smoking and asthma and  
 16:20:44 4 wheeze. They get a risk of 0.94, which is virtually  
 16:20:50 5 unity. Eight studies and zero of the eight studies.  
 16:20:57 6 Showed a statistically significant association.

16:20:59 7 So although intuitively, I developed this  
 16:21:02 8 thinking from looking at the data and trying to interpret  
 16:21:05 9 what I think is important, I think if one looks at the  
 16:21:10 10 literature that has been published, I don't believe it's  
 16:21:12 11 been recognized with that interpretation. But I think  
 16:21:16 12 anyone who looked at this particular interpretation with  
 16:21:19 13 any degree of objectivity would agree with me.

16:21:22 14 Q Is the table that we have here as Exhibit  
 16:21:24 15 5199 explained and discussed in your manuscript?

16:21:29 16 A Yes. In the discussion section.

16:21:30 17 Q All right. Now, there was, produced, some  
 16:21:40 18 documents that I understand to be your file, and I want to  
 16:21:44 19 ask you about just a few of those.

16:22:05 20 What is ICTM, sometimes Kit Booher,  
 16:22:09 21 B-o-o-h-e-r, is identified as ICTM?

16:22:13 22 A Yes. I don't -- I overlapped. I'm sorry. I  
 16:22:19 23 don't know the exact arrangement. But the Center for  
 16:22:21 24 Environmental Health and Human Toxicology, of which the  
 16:22:26 25 principal people were my brother and Sorrell Schwartz,  
 16:22:32 26 several years ago joined in a business arrangement with  
 16:22:39 27 another consulting group that the principal individual, as  
 16:22:45 28 I recall, is a fella named Ronald Gots, G-o-t-s. And his  
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16:22:51 1 group was called International Center of Toxicology and  
 16:22:57 2 Medicine.

16:22:58 3 So they are based in Rockville, Maryland.  
 16:23:01 4 They have joined facilities, and I think they share their  
 16:23:06 5 business activities. But it's also my understanding that  
 16:23:14 6 tobacco-related work is done under the umbrella of the  
 16:23:18 7 Center of Environmental -- CE -- CEHHT. It must be late  
 16:23:27 8 in the day, and I'm losing it a little bit.

16:23:30 9 And the reason -- I think I just sent it to  
 16:23:36 10 Kit for ICTM, habitually. That's all. That's the only  
 16:23:41 11 significance.

16:23:41 12 Q I'll just show you this page as an example.  
 16:23:45 13 It's P65RJW0000016. It's addressed to Kit at CEHHT,  
 16:23:57 14 asking for a literature search.

16:23:59 15 A Uh-huh.

16:23:59 16 Q And it makes reference to this number, CEHHT  
 16:24:03 17 No. C01100PE10.

16:24:07 18 What is that?

16:24:07 19 A It's my understanding that's the code they  
 16:24:09 20 use for billing purposes.

16:24:11 21 Q So is that somehow referring to this project  
 16:24:14 22 or this case?

16:24:15 23 A That's right. When I send, because there are  
 16:24:19 24 other projects that I may be involved in, they want to  
 16:24:23 25 know if they're going to do a literature search and they  
 16:24:26 26 use Kit's time, that they want to know who to charge those  
 16:24:32 27 activities to. But that's the extent of my knowledge.



16:24:35 28 Q This document is some handwritten notes.  
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16:24:38 1 It's page 18 in the production of your file.

16:24:41 2 Is that your handwriting?

16:24:42 3 A It looks like it.

16:24:43 4 Q What is it referring to?

16:24:45 5 A These are notes that I took on papers that I

16:25:08 6 have read that deal with the issue of causation. No,

16:25:18 7 they're not papers. These are books that I got in the

16:25:23 8 medical school library. Freedman is a textbook of

16:25:27 9 epidemiology. McMahon and Trichopoulos are another

16:25:33 10 textbook, and they deal with the principles of

16:25:35 11 association.

16:25:36 12 I wanted to make sure that my impression was

16:25:38 13 consistent with the standard impressions in the

16:25:41 14 literature. So that that's -- these -- these deal with

16:25:45 15 issues of principles of causation in epidemiology.

16:25:48 16 I had read some of Bradford Hill, and I was

16:25:51 17 interested in seeing what other authors had to say about

16:25:55 18 causation. And, basically, with fine, very subtle

16:26:01 19 differences, they basically are saying the same thing.

16:26:05 20 Those are the major issues dealing with

16:26:10 21 causation.

16:26:10 22 Q The Freedman text is what? What's the title

16:26:24 23 of the book?

16:26:24 24 A I don't know offhand. I may have checked it

16:26:31 25 out from the library. I returned it at the end of the

16:26:36 26 summer. I -- whatever it is, Freedman Principles, it's a

16:26:42 27 standard. I did a search in the library database of books

16:26:46 28 in toxicology, and I picked recent ones that I thought

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16:26:50 1 were authored by people who had good reputations in the

16:26:54 2 field. I knew of some of Gary Freedman's work. Dimitri

16:27:00 3 Trichopoulos is very well known. And McMahon is very well

16:27:06 4 known. And I took their books out of the library, and I

16:27:09 5 scanned those chapters. So these are notes that I've

16:27:10 6 taken from the chapters.

16:27:10 7 Q So the Freedman is a text on toxicology?

16:27:13 8 A That's right. No, no. Did I say

16:27:15 9 toxicology? I'm sorry. I meant epidemiology. I

16:27:17 10 apologize.

16:27:18 11 Q And then the McMahon reference is with

16:27:20 12 Trichopoulos?

16:27:21 13 A They're the authors of the book. I think the

16:27:23 14 senior author is Trichopoulos because McMahon is very

16:27:28 15 senior, you know, probably near retirement. They were

16:27:33 16 standard texts in epidemiology. I -- I have a -- I feel a

16:27:41 17 good intuitive sense about what epidemiology is, because

16:27:44 18 I've done it practically all these years. From time to

16:27:48 19 time, I like to look at texts just to sort of confirm that

16:27:53 20 my intuition is consistent with what people say.

16:27:57 21 Q All right.

16:27:57 22 A And as far as I can tell, my intuition is

16:28:00 23 very much on the money.

16:28:01 24 Q Trichopoulos is T-r-i-c-h-o-p-o-u-l-u-s?

16:28:07 25 A To the best of my knowledge, yes.

16:28:08 26 Q Are you an expert in epidemiology?

16:28:14 27 MR. STONE: Objection; asked and answered.

16:28:15 28 You can answer again.

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16:28:17 1 BY MR. HULBURT:

16:28:17 2 Q I didn't ask that question. I asked if you

16:28:19 3 were an epidemiologist, and you said no.

16:28:22 4 So in this case, are you holding yourself out  
16:28:24 5 as an expert in epidemiology?  
16:28:26 6 A I think in this case, I could say I have  
16:28:28 7 expertise in this area.  
16:28:30 8 Q What makes you an expert in epidemiology?  
16:28:32 9 A Experience.  
16:28:33 10 Q Experience?  
16:28:34 11 A Reading the literature.  
16:28:36 12 Q Experience in reviewing epidemiology --  
16:28:38 13 A In reviewing the studies.  
16:28:40 14 Q We've got to do it one at a time.  
16:28:43 15 A Sorry.  
16:28:44 16 Q Experience in reading epidemiology --  
16:28:46 17 A That's right.  
16:28:47 18 Q -- papers?  
16:28:48 19 A That's correct.  
16:28:48 20 MR. STONE: I don't know if he had finished  
16:28:50 21 his first answer. You asked him what makes him an expert  
16:28:54 22 in epidemiology. He said experience, and then I thought  
16:28:57 23 he might not have finished his answer at that point  
16:29:01 24 because you then asked him experience in reviewing  
16:29:03 25 epidemiology. So I don't know.  
16:29:04 26 BY MR. HULBURT:  
16:29:04 27 Q Do you have something else you want to add?  
16:29:06 28 What makes you an expert in epidemiology?  
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16:29:10 1 A Can I make just a little comment on what I  
16:29:12 2 think expertise is.  
16:29:14 3 Expertise is a combination of formal training  
16:29:17 4 and also in experience. And based on my reading of  
16:29:25 5 epidemiology, where I may lack certain expertise in the  
16:29:31 6 mechanics of epidemiology, I see a lot of epidemiologic  
16:29:35 7 literature, lack in having a knowledge of what biology is  
16:29:39 8 all about, and a plausibility of interpretation.  
16:29:41 9 So I think by virtue of my experience in this  
16:29:47 10 literature, by virtue of my experience in reading and  
16:29:52 11 following literature for a long time, and my formal  
16:29:55 12 training and teaching experience in biological,  
16:29:58 13 physiological principles, I feel very comfortable in the  
16:30:01 14 evaluation of this literature.  
16:30:03 15 Under those -- with those qualifications, I  
16:30:06 16 would call myself an expert.  
16:30:08 17 Q In this pack of documents that you produced  
16:30:14 18 as part of your file, you've included several articles or  
16:30:17 19 at least the first page of several articles.  
16:30:21 20 Can you share with me the thought process of  
16:30:24 21 do these articles represent some category of documents, or  
16:30:28 22 what were you intending to do with these?  
16:30:30 23 A It was -- it was my -- sorry. It was my  
16:30:33 24 attempt at very short notice, as being as comprehensive as  
16:30:39 25 I can. And I -- what I did is I pulled out what I thought  
16:30:44 26 in the literature that had been accumulated as towers on  
16:30:49 27 my desk what were papers that I reviewed that entered into  
16:30:54 28 my thinking.  
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16:30:55 1 So that was an attempt to be as  
16:30:58 2 comprehensive as I can in dealing with these papers. In  
16:31:03 3 some way, I looked at them and they addressed the issue.  
16:31:07 4 Q Are these all names that you're relying on as  
16:31:13 5 a basis in forming your opinions in this case?  
16:31:16 6 A Yes.  
16:31:16 7 Q But they're not all the papers that you're  
16:31:18 8 relying on, or are they? Are these all the papers?

16:31:21 9 A It's very hard to say because I have a  
16:31:24 10 long -- a large experience. I tried to be as  
16:31:26 11 comprehensive.

16:31:27 12 Q Was it your intention in providing these at  
16:31:30 13 least cover pages of articles, to provide all the articles  
16:31:33 14 that you were relying on as the basis of your opinions?

16:31:37 15 A That's right. I can't say with certainty  
16:31:39 16 whether there is a paper that I read that entered into my  
16:31:43 17 thinking that I may have filed somewhere else and was not  
16:31:47 18 readily accessible.

16:31:48 19 Q There's a collection of handwritten notes  
16:31:52 20 which are page 32 through -- they're Bates numbered 32  
16:32:16 21 through 82. The handwritten numbers go from 32 to 84.

16:32:25 22 A I'll explain what the handwritten numbers  
16:32:28 23 are.

16:32:28 24 Q Okay.

16:32:29 25 A Okay. When I was asked to get these  
16:32:31 26 materials to the L.A. office, Greg Stone, my wife, as a  
16:32:40 27 favor to me, faxed these materials. And I put them all in  
16:32:43 28 a file, and then I numbered them in sequence 1 to 141 so  
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16:32:49 1 that there would be some idea what the sequence was. So  
16:32:53 2 these are notes that I -- again --

16:32:57 3 Q Let me ask you a question.

16:32:58 4 A Yes.

16:32:59 5 Q What do these notes -- first, when were they  
16:33:02 6 made, and, second, what are they referring to?

16:33:05 7 A These are -- let me indicate that when I --  
16:33:08 8 being unfamiliar with the whole process, I just do things  
16:33:12 9 in a relatively haphazard fashion. And I have this  
16:33:17 10 notepad file of my writings that I refer to.

16:33:20 11 So I would say they were probably done  
16:33:23 12 because I think they all relate primarily -- yes. They  
16:33:26 13 relate primarily to the SIDS literature. There was an  
16:33:31 14 area that I had not looked at since -- in detail since  
16:33:37 15 1997.

16:33:38 16 And this was my -- these are the notes I  
16:33:43 17 took to get back up to speed, and they probably were done  
16:33:45 18 within the last month or so because the SIDS was sort of  
16:33:48 19 the last issue.

16:33:49 20 So what I was saying here is I was going  
16:33:51 21 through these papers and writing down the conclusions of  
16:33:54 22 what they said, and I think -- well, the reason I do it  
16:33:58 23 this way is that's my way of retaining and digesting and  
16:34:03 24 absorbing the information. As I write it, it helps me  
16:34:08 25 concentrate and helps me incorporate. And it's also a  
16:34:12 26 means of abstracting the information that's important in  
16:34:17 27 my thinking. So these are just my notes on all of the  
16:34:21 28 papers that I addressed in my thinking of parental smoking  
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16:34:27 1 and SIDS.

16:34:28 2 Q Have you ever been retained to prepare any  
16:34:34 3 testimony or any papers on the relationship between ETS  
16:34:38 4 and SIDS, before this case?

16:34:40 5 A Only as it relates to commentary on the  
16:34:51 6 California EPA report. I was asked to -- and I don't  
16:34:56 7 recall specifically how I got into SIDS, but I got into  
16:35:00 8 SIDS. And I -- and I don't recall whether I did it de  
16:35:04 9 novo, out of the blue. In all likelihood, I did it in --  
16:35:09 10 I was asked to do it in response to what the California  
16:35:11 11 EPA report said about SIDS.

16:35:14 12 Q Okay. Have you ever done ETS and SIDS other  
16:35:16 13 than that?

16:35:18 14 A Well, I did it more recently when I updated  
16:35:21 15 it for this deposition.  
16:35:22 16 Q I understand that.  
16:35:22 17 MR. STONE: You doing okay?  
16:35:27 18 THE WITNESS: I'm getting a little tired.  
16:35:29 19 MR. STONE: Chris --  
16:35:33 20 MR. HULBURT: If we can keep going, we might  
16:35:35 21 get done.  
16:35:35 22 MR. STONE: I had the impression you were  
16:35:37 23 trying to finish today. And that's fine. I mean, I  
16:35:40 24 wanted to accommodate that. I'm sure the witness wants  
16:35:43 25 to.  
16:35:43 26 Would you like -- like a five-minute break?  
16:35:46 27 THE WITNESS: That would be good.  
16:35:47 28 MR. STONE: Is that okay with you if we do  
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16:35:49 1 that?  
16:35:49 2 VIDEOGRAPHER: Just a moment, please. We're  
16:35:51 3 off the record at 4:36 p.m.  
16:35:53 4 (Recess.)  
16:41:51 5 VIDEOGRAPHER: We're back on the record at  
16:42:00 6 4:42 p.m.  
16:42:03 7 MR. HULBURT: Exhibit 5200 is from your file,  
16:42:14 8 pages 122 through 137. It's a list of 197 references,  
16:42:22 9 articles, I guess.  
16:42:24 10 (Exhibit 5200 was marked for identification.)  
16:42:28 11 BY MR. HULBURT:  
16:42:28 12 Q Can you tell me what that is?  
16:42:30 13 A Yes. In my attempt to be conclusive, while I  
16:42:34 14 felt I shouldn't submit the article that was under review,  
16:42:36 15 I took the bibliography from that paper, and I included  
16:42:41 16 that. So these are all of the references that I have  
16:42:44 17 addressed in my thinking, if you will, regarding ETS and  
16:42:50 18 respiratory health effects in children.  
16:42:52 19 Q So that's the bibliography from the  
16:42:54 20 manuscript --  
16:42:55 21 A That's right.  
16:42:56 22 Q -- that's currently in review?  
16:43:00 23 A That's right.  
16:43:01 24 Q Are you relying on all of these articles as  
16:43:07 25 part of the basis of your opinions in this case?  
16:43:11 26 A I would guess so, yes. There's nothing  
16:43:14 27 excluded in that list. There may be things in that list  
16:43:18 28 that don't pertain.  
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16:43:33 1 Q So what was your purpose in providing this  
16:43:37 2 list?  
16:43:38 3 A Well, they -- they include all of the  
16:43:43 4 epidemiologic studies that relate to parental smoking,  
16:43:52 5 respiratory health effects in children, and also include  
16:43:58 6 other studies that have addressed the issue in one way or  
16:44:02 7 another.  
16:44:03 8 They include the meta-analysis studies which  
16:44:07 9 I include in this table, and they also include papers that  
16:44:13 10 address such issues as meta-analysis, statistical  
16:44:19 11 significance, elements of causation.  
16:44:23 12 Q Also in your file that you produced is this  
16:44:36 13 document that says a facsimile report reproduced by the  
16:44:41 14 United States Department of Energy. It's pages 138  
16:44:48 15 through 160 of your file.  
16:44:51 16 What is that?  
16:44:52 17 A I didn't send this. But it wound up in your  
16:45:06 18 office. And what this is is somebody sent -- this is a --

16:45:11 19 from the 1987 meeting that I attended in Berlin. So I  
16:45:16 20 didn't send that. I don't know how it got to your file,  
16:45:19 21 but it's the -- I think it's the program of the meeting.  
16:45:22 22 Q Why is that part of your file as it was  
16:45:26 23 produced to me?  
16:45:27 24 A Somewhere along the line, it probably wound  
16:45:30 25 up in one of the attorneys' files, but I didn't send this.  
16:45:34 26 Q Is this a document that you're using or  
16:45:37 27 relying on in any way for any of your testimony in this --  
16:45:40 28 A Not specifically --  
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16:45:41 1 Q -- for any of your testimony in this case?  
16:45:44 2 A Not specifically. Except certainly some of  
16:45:45 3 the papers that I addressed back in 1987 have entered into  
16:45:53 4 my thinking. But it would be really -- there's no need  
16:45:56 5 why I should do that. I don't know how it appeared in  
16:45:58 6 your -- it's a program, I believe.  
16:46:04 7 Q The last -- I guess the last few pages from  
16:46:29 8 page 156 through 160 is an abstract.  
16:46:38 9 Is that the abstract of the paper that you  
16:46:40 10 presented at that conference?  
16:46:41 11 A It's not an abstract -- sorry. It's not an  
16:46:44 12 abstract. It looks like the -- as I recall, we were asked  
16:46:50 13 to write a small manuscript of what our presentation was  
16:46:57 14 all about. And the abstract is probably the first  
16:47:07 15 paragraph. Yes. The rest is just a detailed description  
16:47:14 16 of what -- so it's an abbreviated paper that was upon the  
16:47:20 17 request of the meeting, what they wanted us to do.  
16:47:22 18 Q Okay. Also produced as part of your file to  
16:47:26 19 me are pages 161 through 199, which is entitled  
16:47:32 20 "Environmental tobacco smoke, proceedings of the  
16:47:35 21 international symposium at McGill University, 1989."  
16:47:42 22 Why is that in your file? Well, I guess I  
16:47:46 23 should first ask you is were you aware that that was in  
16:47:49 24 your file?  
16:47:49 25 A No.  
16:47:49 26 Q All right. So do you know how that got into  
16:47:52 27 your file, as produced to me?  
16:47:55 28 A I don't know. But it's relevant. But it's  
Vail, Christians & Associates (619)544-8344 199  
16:47:57 1 history -- of historical significance, because it's the  
16:48:01 2 Montreal paper that I alluded to previously, as the list  
16:48:08 3 of all the participants and opening remarks.  
16:48:14 4 Let me see what else is here.  
16:48:16 5 And it's the paper that is the first paper of  
16:48:25 6 the series where I review the parental smoking,  
16:48:29 7 respiratory health effects, and pulmonary function.  
16:48:32 8 MR. STONE: Just give him the number.  
16:48:34 9 THE WITNESS: I'm sorry.  
16:48:35 10 MR. STONE: It's 178.  
16:48:38 11 THE WITNESS: 178, forward. My  
16:48:41 12 presentation. It's the transcript of my presentation.  
16:48:46 13 What I mean by transcript is I --  
16:48:48 14 BY MR. HULBURT:  
16:48:48 15 Q It's the paper?  
16:48:49 16 A It's the paper. Right.  
16:48:51 17 Q And that's a publication that you made  
16:48:53 18 reference to earlier today?  
16:48:55 19 A I believe I did.  
16:48:56 20 Q I think so.  
16:48:57 21 A Yes.  
16:48:58 22 Q As one of your early publications --  
16:49:00 23 A That's right.

16:49:01 24 Q -- at the McGill conference?  
16:49:04 25 A That's right.  
16:49:04 26 Q Pages 200 through 325 of the production of  
16:49:09 27 your file is entitled "Environmental tobacco smoke,"  
16:49:13 28 proceedings from the same McGill University symposium.  
Vail, Christians & Associates (619)544-8344 200  
16:49:23 1 So I take it you didn't know that was in your  
16:49:26 2 file either?  
16:49:26 3 A Specifically, I don't recall it being sent.  
16:49:28 4 I didn't send it.  
16:49:29 5 Q All right. What's the significance of that  
16:49:31 6 paper, as it relates to your testimony in this case?  
16:49:33 7 A I'll take a look. All right.  
16:49:54 8 Pages 217, as I look at it, this is a  
16:50:08 9 response -- a panel discussion at the end of the paper.  
16:50:14 10 There were people who were asked to comment on a paper.  
16:50:19 11 The paper was -- the author of that paper was Dr. Ronald  
16:50:22 12 Hood, and it dealt with ETS effects and growth retardation  
16:50:28 13 and birth defects in offspring. And it deals with various  
16:50:32 14 people who contributed to this particular commentary. And  
16:50:36 15 here I see Dr. Wu's name, William Butler.  
16:50:46 16 I see so far, going up to page 223, nothing  
16:51:06 17 in reference. I believe I sat on that board. Maybe I  
16:51:11 18 didn't have anything to say.  
16:51:12 19 Q Are you relying on this paper as part of the  
16:51:18 20 basis of your opinion -- any of your opinions in this case?  
16:51:23 21 A I'm sure some of my views, but not as the  
16:51:26 22 basis, no. Here. I have a small commentary on page --  
16:51:30 23 no. It's more than that. I -- from page 230 to 231, I  
16:51:40 24 give a commentary on some of the papers relevant to the  
16:51:44 25 issue. It relates to the database that I addressed with  
16:51:51 26 regard to ETS and IUGR. I would say it is of very little  
16:52:00 27 value. Although, it's consistent with my current  
16:52:02 28 opinions. It was so long ago, and my reviews have been so  
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16:52:07 1 much more thorough, that it adds very little to the -- and  
16:52:12 2 I don't know what's beyond here. It looks -- oh. Okay.  
16:52:18 3 Oh. This is -- I assume somebody felt the  
16:52:26 4 need to provide you with some more background. This is  
16:52:34 5 the paper that appeared in the Zeitschrift  
16:52:39 6 Gesundheitweisen.  
16:52:42 7 Q What page is that?  
16:52:43 8 A 236.  
16:52:46 9 And when I go through, what it looks like,  
16:52:48 10 without wasting anybody's time, various articles that we  
16:52:52 11 have written on the issue. And it's more of the same of  
16:52:54 12 our opinions on these various issues.  
16:52:56 13 Q All right. Let me -- let me have that.  
16:53:01 14 A The whole thing?  
16:53:02 15 Q Don't put it back together.  
16:53:04 16 A Okay.  
16:53:04 17 Q All right. Just so the record is clear, it  
16:53:45 18 looks like the environmental tobacco smoke proceedings  
16:53:50 19 from McGill University, 1989, are pages 200 through 235.  
16:53:56 20 And pages 236 through 325 are a collection of other --  
16:54:03 21 other publications, other articles related in some way to  
16:54:07 22 environmental tobacco smoke.  
16:54:09 23 A Earlier.  
16:54:10 24 Q And then exhibit -- or page 326 through 342  
16:54:34 25 is a comment that you prepared in response to the  
16:54:36 26 California EPA paper; is that right?  
16:54:40 27 A I'm looking to -- yes. To the external  
16:54:58 28 review draft. So it was after looking at the external

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16:55:02 1 review, first draft.

16:55:03 2 Q All right. And 343 to 384 is another

16:55:08 3 comment -- it's a comment to the final draft of the

16:55:10 4 California EPA, 1997; is that right?

16:55:13 5 A Yes.

16:55:16 6 Q And the same sort of thing, 385 through 401,

16:55:23 7 are comments that you prepared to the California EPA

16:55:26 8 report in 1997?

16:55:28 9 A Yes. The first one I have in my hand deals

16:55:32 10 with perinatal manifestations.

16:55:34 11 Q What page?

16:55:35 12 A 343 deals with fetal growth and ETS exposure,

16:55:41 13 Chapter 3 of the final draft. And the next one deals with

16:55:52 14 Chapter 6, respiratory health effects, on the final draft.

16:55:57 15 Q That was done on behalf of The Tobacco

16:56:01 16 Institute?

16:56:02 17 A It was done at the request of somebody in the

16:56:07 18 tobacco industry, and my recollection is it was somebody

16:56:10 19 at Covington & Burling.

16:56:11 20 Q It says, in fact, in the first paragraph,

16:56:16 21 these comments are being submitted at the request and with

16:56:18 22 the support of the law firm of Covington & Burling,

16:56:21 23 Washington, D.C., on behalf of their client, The Tobacco

16:56:23 24 Institute.

16:56:24 25 A That's true.

16:56:25 26 Q Okay. And that's true on each of these --

16:56:28 27 A Okay.

16:56:28 28 Q -- comments that you submitted to Cal EPA; is

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16:56:31 1 that right?

16:56:31 2 A That's true.

16:56:32 3 Q So is it fair to say that when you've

16:56:40 4 submitted reports or publications, you've known who the

16:56:43 5 client is?

16:56:45 6 A It's fair to say. Although, I wasn't very

16:56:48 7 cognizant of it. I might have just typed it in, but it

16:56:51 8 wasn't important to me.

16:56:53 9 Q The next document is page 402 through 442,

16:57:01 10 entitled "Further analyses of the role of confounding

16:57:03 11 variables in epidemiologic studies of environmental

16:57:07 12 tobacco smoke and the respiratory system in school-aged

16:57:12 13 children."

16:57:17 14 That's more of your work?

16:57:18 15 A That is my work. I think this is the paper

16:57:22 16 that we wrote for -- I didn't present it. I think Phil

16:57:27 17 presented it. It was in Thailand, and it was a paper that

16:57:33 18 was presented at a symposium in 1991 or '92. And I

16:57:39 19 might -- yes. In every -- in every paper, we try to

16:57:44 20 attribute the sponsor. In some cases, it could be The

16:57:49 21 Tobacco Institute. In some cases, it could be Philip

16:57:52 22 Morris. In some cases, it could be Brown & Williamson.

16:58:06 23 Q So this -- this paper, then, was something

16:58:10 24 presented at a conference as opposed to something that's

16:58:14 25 published in a journal?

16:58:15 26 A That's right. It was presented in a

16:58:18 27 conference, and it was --

16:58:19 28 Q A conference of what? Of whom?

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16:58:21 1 A I don't know for sure. I wasn't at the

16:58:24 2 conference. It was some indoor air conference, and I

16:58:30 3 don't know much more about that.

16:58:35 4 MR. STONE: I think at the bottom of the

16:58:36 5 first page, in different type, it indicates.  
16:58:40 6 THE WITNESS: It was a conference in  
16:58:41 7 Thailand.  
16:58:42 8 MR. STONE: It indicates that it was a  
16:58:43 9 conference in Thailand and the proceedings were  
16:58:46 10 published. And it says certain pages of the proceedings.  
16:58:49 11 THE WITNESS: Yes.  
16:58:49 12 MR. HULBURT: I see. All right.  
16:58:51 13 THE WITNESS: It might indicate in the  
16:58:52 14 proceedings whether it was supported by the tobacco  
16:58:54 15 industry.  
16:58:54 16 BY MR. HULBURT:  
16:58:54 17 Q It says right here this work was supported in  
16:58:59 18 part by The Tobacco Institute of the United States.  
16:59:02 19 A Our work was supported by -- I don't know  
16:59:04 20 about the conference.  
16:59:05 21 Q Oh. I follow. All right.  
16:59:14 22 Do you have any opinions regarding the  
16:59:16 23 respiratory effects -- strike that.  
16:59:18 24 Do you have any opinions regarding the  
16:59:20 25 relationship between ETS and respiratory illness in  
16:59:23 26 children that we have not already discussed?  
16:59:27 27 A Not that I can think of.  
16:59:30 28 Q Do you have any opinions regarding the  
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16:59:31 1 relationship between ETS during pregnancy and intrauterine  
16:59:38 2 growth retardation?  
16:59:40 3 A I think we've covered that pretty thoroughly  
16:59:43 4 as well.  
16:59:44 5 Q All right. Do you have any opinions that we  
16:59:45 6 have not discussed regarding the relationship between ETS  
16:59:48 7 and SIDS?  
16:59:51 8 A As I --  
16:59:52 9 MR. STONE: Other than those that we've  
16:59:53 10 discussed?  
16:59:54 11 MR. HULBURT: Yeah. I think I said that.  
16:59:55 12 MR. STONE: Oh. I'm sorry. I think you  
16:59:58 13 did. I apologize.  
16:59:59 14 MR. HULBURT: You have to read faster.  
17:00:01 15 MR. STONE: I've got to read faster.  
17:00:03 16 THE WITNESS: To the best of my recollection  
17:00:04 17 of what transpired today, I think we've covered it  
17:00:08 18 pretty -- pretty comprehensively.  
17:00:13 19 MR. HULBURT: All right. I have nothing  
17:00:16 20 further at this time, other than I want to reserve my  
17:00:20 21 right for further questioning after we resolve my request  
17:00:25 22 for the production of the current manuscript and the work  
17:00:29 23 that supports that.  
17:00:31 24 As I've discussed, I think that clearly is  
17:00:34 25 part of the basis of his opinion, should have been  
17:00:37 26 produced, should be produced. And if and when it is  
17:00:40 27 produced, I expect to have the opportunity to do further  
17:00:44 28 questioning.  
Vail, Christians & Associates (619)544-8344 206  
17:00:45 1 Other than that, I have no further questions  
17:00:47 2 at this time.  
17:00:47 3 MR. STONE: I don't have any questions.  
17:00:50 4 MR. LENDRUM: No questions.  
17:00:51 5 MR. HULBURT: Okay. I don't know. Is there  
17:00:55 6 a stipulation or you wanted to give a stipulation?  
17:00:58 7 MR. STONE: Let me try one.  
17:00:59 8 If you send the original transcript to me,  
17:01:01 9 I'll make it available to the witness for his review and



17:01:03 10 signing. In the event the transcript is not corrected and  
17:01:08 11 signed within 30 days of my receipt, a copy can be used in  
17:01:11 12 lieu of the original as though it had been signed in its  
17:01:14 13 uncorrected form.  
17:01:16 14 The court reporter is relieved of her  
17:01:17 15 obligation to maintain the original. It may be signed  
17:01:20 16 under penalty of perjury. I will undertake the obligation  
17:01:23 17 to notify counsel of any changes made by Dr. Witorsch  
17:01:29 18 prior to his signing and of the fact of his signing of the  
17:01:32 19 transcript in the event he does sign it. And I'll retain  
17:01:35 20 the original transcript and make it available upon request  
17:01:39 21 at the time of trial or in connection with any pretrial  
17:01:42 22 proceedings.  
17:01:42 23 Did I cover everything?  
17:01:43 24 MR. HULBURT: I think so. So stipulated.  
17:01:48 25 Did you say if for any reason the original is  
17:01:50 26 unsigned or unavailable, a copy can be used as if it were  
17:01:54 27 a signed original?  
17:01:55 28 MR. STONE: I did.  
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17:01:55 1 VIDEOGRAPHER: Okay. Just a moment, please.  
17:01:58 2 This concludes the videotaped deposition of Dr. Witorsch.  
17:02:01 3 Off the record at 5:02 p.m.  
17:02:03 4 (Whereupon, at 5:02 p.m. the proceedings were  
17:02:03 5 adjourned.)  
17:02:03 6 \* \* \* \* \*  
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Vail, Christians & Associates (619)544-8344 208  
17:02:03 1 I hereby declare under penalty of perjury that  
17:02:03 2 the foregoing is my deposition under oath; that these are  
17:02:03 3 the questions asked of me and my answers thereto; that I  
17:02:03 4 have read my deposition and have made the necessary  
17:02:03 5 corrections, additions or changes to my answers that I  
17:02:03 6 deem necessary.  
17:02:03 7 In witness thereof, I hereby subscribe my name,  
17:02:03 8 this \_\_\_\_\_ day of \_\_\_\_\_ 2000.  
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17:02:03 15 Raphael Witorsch

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17:02:03 1 STATE OF CALIFORNIA )  
17:02:03 2 : SS.  
17:02:03 3 COUNTY OF SAN DIEGO )

17:02:03 4  
17:02:03 5 I, Margaret A. Smith, CSR No. 9733, hereby certify  
17:02:03 6 that I reported in shorthand the above proceedings on  
17:02:03 7 Monday, July 24, 2000, at 550 West C Street, Suite 1440,  
17:02:03 8 in the City of San Diego, County of San Diego, State of  
17:02:03 9 California; and I do further certify that the above and  
17:02:03 10 foregoing pages, numbered from 4 to 208, inclusive,  
17:02:03 11 contain a true and correct transcript of all said  
17:02:03 12 proceedings.

17:02:03 13 It was stipulated that the original deposition be  
17:02:03 14 delivered to Mr. Stone, for the purpose of having the  
17:02:03 15 witness read, correct and sign his deposition under  
17:02:03 16 penalty of perjury; said original thereafter to be  
17:02:03 17 maintained by Mr. Stone until the time of trial.

17:02:03 18 DATED: JULY 31, 2000.

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MARGARET A. SMITH  
CSR NO. 9733

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